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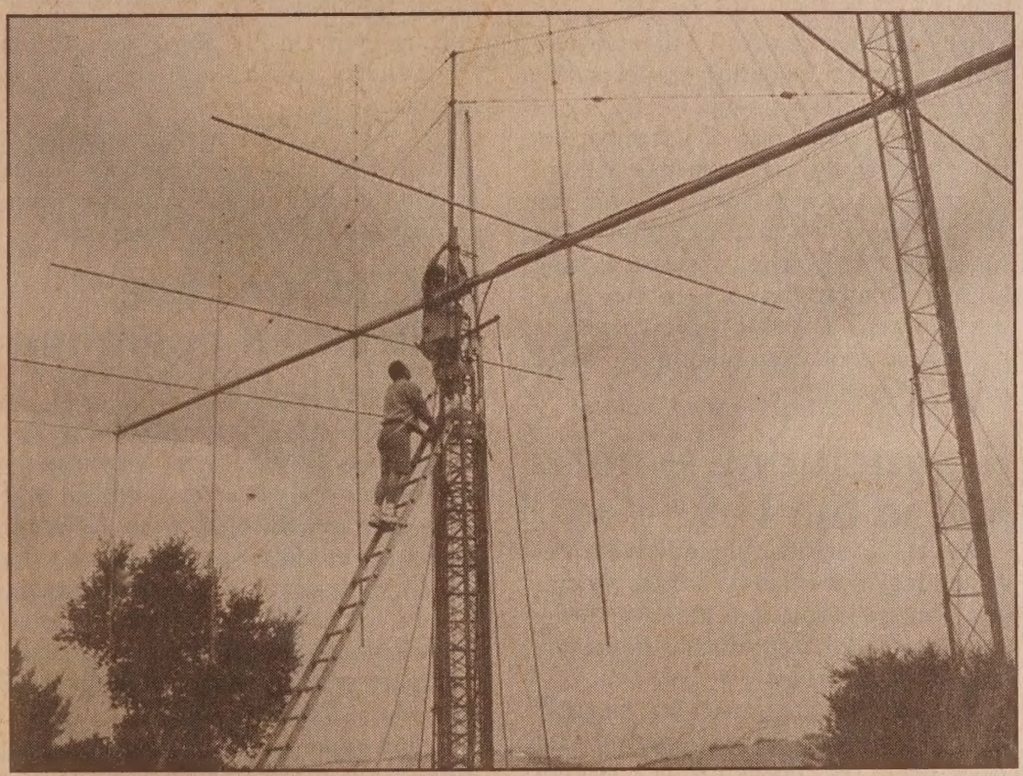

Now that's a quad!

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PRB-1 bill in California

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RSGB Convention — 1999

Full CW credit for U.S. Novice licensees

The FCC now says anyone who has ever passed the old Novice Morse code test and can prove it will be given indefinite credit for that test element — even if that license expired long ago. Anyone who ever held a Novice ticket, expired or otherwise, will be able to claim credit for Element 1, the 5 wpm Morse code examination, under revised Amateur Radio licensing rules going into effect 15 April. The change was included in the version of the FCC's restructuring rules, published 10 February in *The Federal Register.*

The change affects Section 97.505(a)(5) of the rules that spells out element credit. That sentence now says: "An expired or unexpired FCC-granted Novice Class operator license grant: Element 1."

The rules already give Element 1 credit for those holding an expired or unexpired FCC-issued Technician Class operator license document granted before 14 February 1991, as well as to applicants possessing an FCC-issued commercial radiotelegraph operator license or permit that's valid or expired less than 5 years.

There's no indication, however, that the FCC intends to extend Element 1 credit to applicants who once held any other FCC-issued licenses now expired, including Tech Plus, General, Advanced, or Amateur Extra.

Because of other anomalies in the new rules, the ARRL is recommending for now that holders of Novice or Tech Plus licenses retain their license documents or copies in the event they need to claim Element 1 credit when upgrading under the new rules. When renewed after 15 April, 2000, Technician Plus licenses will come back stamped "Technician," and the FCC has said it does not plan to keep track of which Technicians have Morse code element credit and which do not.

The FCC also has indicated to the ARRL that post-15 April Technicians who subsequently qualify for HF operation by passing Element 1 will retain element credit for upgrading purposes only for 365 days, the term of a Certificate of Successful Completion of Examination, not permanently, although this will not affect their ongoing Novice/Technician HF privileges. Without a change in the rules, affected Technicians attempting to upgrade more than a year after passing Element 1 would have to retake the Morse code examination. — *FCC, ARRL, Newsline*

Restructuring — not just in the U.S.

The FCC restructuring of U.S. licenses is catching on in other countries. Australia is taking a serious look at restructuring and Israeli Amateur Radio operators have some new rules.

The authorities in Israel recently changed several rules and privileges for all of the license classes as well as adding a new class of license.

Among the changes: Grade D (Code-free technical) licensees now can operate on 6 Meters, 1.2 and 5.6 GHz. The new Grade D+ license is an upgrade from Grade D by passing a 6 wpm code test. Additional privileges include the HF privileges afforded to the Novice or Grade C license. Grade C licensees (Novice) now can operate on the CW subbands on 14 and 28 MHz, with a maximum power output of 100 Watts. The can also operate digital modes on 28 MHz. Grade B (General) license holders can now use up to 250 Watts on HF. Operation on 6 Meters is now permitted with a maximum of 25 Watts. Microwave band power limits have been raised to 25 Watts. HF subbands for Grade B licensees have been eliminated, putting them on HF along with all the frequencies authorized for Grade A licenses.

Morse code speeds remain the same at 16 wpm for Grade A, 12 wpm for Grade Bs and Grade C and D+ require 6 wpm. — *HAGAL International Newsletter*

FCC affirms fine; unlicensed operation continues

The FCC has affirmed a $20,000 fine levied on a Florida man last summer for unlicensed operation, willful and malicious interference with Amateur Radio communications, and failure to let the FCC inspect his radio equipment. The FCC's 28 January Forfeiture Order gives William Flippo of Jupiter 30 days to pay up or the matter will be referred to the U.S. Attorney.

Following an FCC Warning Notice, Flippo initially was notified of the fine last July in an FCC Notice of Apparent Liability. Hams in Florida say Flippo has thumbed his nose at the FCC and has continued to flout the law by interfering with local HF and repeater nets. FCC personnel from the FCC's Tampa District Office have followed up on complaints from amateurs that Flippo has regularly interfered with amateurs on 10 Meters, 2 Meters and elsewhere. The Order acknowledges that the Commis-

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sion has received information on "at least five occasions" since the fine was levied last July indicating that Flippo continues to violate federal law.

Flippo's only response to last year's Notice of Apparent Liability was to send the FCC a copy of a one-page bankruptcy filing. The FCC was not impressed, however. "In a case where an NAL has been issued and the recipient continues to engage in the same conduct, we are not inclined to adjust the forfeiture amount, even where the recipient has filed for bankruptcy protection," the Commission said.

One Jupiter-area Ham who has cooperated with the FCC investigation says Flippo has been causing problems for the amateur community in his area since late 1997. He and fellow members of the Jupiter-Tequesta Repeater Group want to see the FCC take a stronger stand in the case.

"I want to see the guy in jail, plain and simple, and his equipment confiscated," said the amateur, who did not want to be identified by name, fearing retaliation. "The problem is, we're all playing by the rules here, and this guy goes out and buys a radio and he gets on the air and does whatever he wants and brags about it."

FCC personnel from the Tampa office visited the Jupiter area at least twice last year as a result of amateur complaints alleging malicious interference from Flippo, primarily on VHF but also on some HF amateur bands. — *ARRL Letter*

Southern California test audit

The FCC has released more information on its audit of a Huntington Beach, California VE testing session held 12 September 1999 by the ARRL VEC.

In its 28 January letter, the FCC identifies the three individuals — Moises Morales, KB6QMR, Juan Huitron, AC6HK, and Daniel Granda, KA6VHC. Among other things, it asks them about missing Morse element documents, Morse entries shown on worksheets, absence of Morse copy for some applicants and why 20 of the 22 applicants all missed question 5 of the Code test.

The FCC also asks Morales, Huitron, and Granda to confirm that the signatures on various documents were really theirs. Also, whether each VE was actually present for the examination session in Huntington Beach. All three were given thirty days to respond. — *FCC, Newsline*

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Editor's Log

Just a couple of days ago, the nominees for the Academy Awards were announced. I must admit, I have not seen any of the movies nominated for best picture, but I did recognize all of the actors and actresses nominated for the Oscar in their respective catagories.

Isn't it a shame the Academy will never recognize a group, nominated every month, deserving of the same attention as their group of nominees? I am pleased to present this month's nominees for our version of the Oscar — our newest lifetime subscribers. Reading the list is none other than the duo of Samuel F.B. Morse and Kurt N. Sterba.

Sam: "And the nominees are:

- **Bobbie Donohue, W1JX Ellsworth, ME**
- **A.P. Hadinoto, W1HAP Cheshire, CT**
- **Ed Burke, KG2PE Toms River, NJ**
- **John Selesky, WB8YXR APO, AE (he's in Europe)**
- **Gerasim Mayden, KØGDM St. Louis, MO**
- **Charles Proffitt, WØBCF Humansville, MO**
- **William H. Hermes, KM5GY Rusk, TX**
- **Joseph D. Lively, KJ5S Fort Worth, TX**
- **Dave Michael, WAØCTZ Highlands Ranch, CO**
- **S.N. Stoltz, KJ6WM Brea, CA**

Kurt: 'Let's not keep anybody in suspense — the winner of the ***Worldradio*** version of the Oscar, determined by your editor from a single ballot tallied by the esteemed accounting firm of Dewey, Cheetam and Howe is..... all of the above!"

And this flash, hot off the wire from the subscription service department. It seems we have been remiss for several years (like seven!) in not mentioning a lifetime subscriber.

- **Bruce P. Reynolds, W3NFS Aberdeen, MD**

Consider your self recognized, Bruce. Sorry about the oversight.

•

First on the agenda — ***Worldradio*** is pleased to announce the addition of two excellent columnists to your favorite Amateur Radio magazine. Joining our list of columnists are Carole Perry, WB2MGP and Bob Heil, K9EID.

Carole Perry, WB2MGP, graces our pages as the new columnist for the Youth Forum. Since 1981, Carole has been on the teaching staff at Intermediate School 72 in Staten Island, New York, where she created a curriculum utilizing Amateur Radio for her students. During her career, she has literally introduced our hobby to thousands of youngsters, and many have gone on to earn their license and join our wonderful hobby. Her curriculum is now in use in over 200 schools throughout the country. And her curriculum doesn't stop there! She wrote lesson plans for NASA to distibute to teachers who are selected to participate in Amateur Radio contacts with astronauts aboard the Space Shuttle.

In recognition of her achievements, Carole was named as the "Dayton Ham of the Year" and the ARRL "Instructor of the Year" in 1987. Six years later she was presented with the "President's Award" by the Quarter Century Wireless Association for her efforts in bringing thousands of young people into Amateur Radio. She also received the 1996 Barry Goldwater award presented by the RCA Club.

Also joining us as a columnist is Bob Heil, K9EID. He is our newest columnist with "Heil on Sound." Bob is an extremely talented musician and engineer, and is an expert in sound and how it works.

Bob started at an early age as an organist. As a very talented youngster, Bob got his first job playing the mighty Wurlitzer organ at the Fox Theater in St. Louis, MO. That led to a lifetime interest in sound and how it can be manipulated. During the 60s and 70s, Bob was the sound engineer for several bands including The Who, The Grateful Dead, Joe Walsh, WB6AMU, and Peter Frampton.

In addition to touring the world providing sound systems for these groups, Bob also developed hundreds of innovative audio products for the audio industry. As a result of his efforts, Bob was presented with the "Live Sound Pioneer Award" from the Audio Engineering Society. He continues to blaze the trail in the consumer electronics market. Since 1977 Bob has been presenting his "High Tech Heil" reports on KMOX, CBS radio. Bob has authored five books and is recognized as the leader in the consumer home theater field.

So there you have it. Please take the time to welcome them aboard! — *WF6O*

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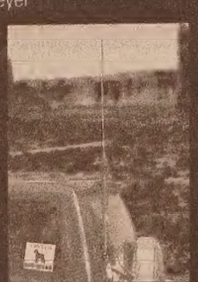

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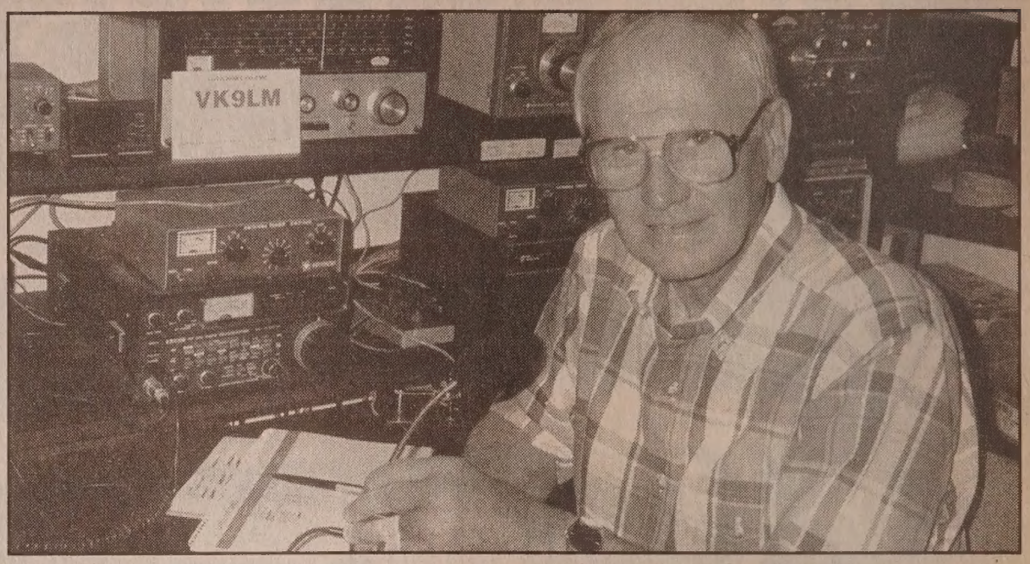
Palms, papayas and pileups

"Dee" Logan, W1HEO/VK9LM



Dee Logan, W1HEO/VK9LM, working a pileup the old-fashioned way — with a pencil and a paper log.

Strolling under a cool canopy of Kentia palms shielding us from the South Pacific sun, our quiet nature walk through Lord Howe Island's Valley of Shadows was a perfect symbol of a dream vacation come true.

My wife, Liz, and I had come to this beautiful little island 702 kilometers (485 miles) northeast of Sydney, Australia, to visit our long-time friends Dick Hoffman, VK9LH, and his wife Noelle. Since I'd recently retired from full-time employment, we had the luxury of time to take such a long trip. And our six-week family vacation certainly would take time, since it included a number of stops in Australia, New Zealand and Fiji. But the most interesting and important destination of all was Lord Howe Island.

We had known Dick since we began regular on-air schedules some 20 years ago, and we had become familiar with Lord Howe Island from the variety of books, articles, maps and photos he'd sent us. As beautiful as it seemed to be, it proved even more spectacular 'in person.' Of course, as an avid DXer, I was well aware of the island's rare status, ranking 99th among the world's 100 most-needed DX entities.

Our two families had become good friends over the years, and naturally each had extended an invitation to come and visit. Dick and Noelle were first, staying with us at our QTH east of Cleveland, Ohio, where we guided them to points of interest, including nearby Niagara Falls.

During their visit, we discussed the possibility of our taking a vacation 'Down Under,' with the main stop being Lord Howe.

"Would you like to operate my station while you're on the island?" Dick had asked. It was an offer I couldn't refuse! While our vacation was not a DXpedition, the thought of operating with a rare call sent my pulse racing. I accepted his kind invitation.

Getting a reciprocal license was simple. I found information and forms on the ARRL Web site, and needed only a copy of my U.S. license and a check for $50 Australian to apply. I received the call VK9LM.

After the long flight from the U.S. to Sydney, the two-hour-plus hop to Lord Howe via a twin-prop Dash 8 was a breeze. During the approach, we eagerly looked down on the 11 km-long volcanic island and found the scene breathtaking.

A stress-busting retreat

Lord Howe features two often cloud-capped mountains, lush forests, secluded palm-lined sandy beaches, a coral reef and peaceful blue lagoons. Dramatic volcanic rock formations dot the island, which is home to numerous rare land and sea birds plus unique varieties of plants. A UN World Heritage Area, its isolation and sub-tropical maritime climate is ideal for protecting and propagating its 18 rare species of land birds and 14

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seabirds, plus the 180 flowering plants and 54 varieties of fern found there.

The island is peaceful and quiet. Its modest size limits the number of visitors to 400 at any one time. Just a few cars are seen negotiating the island's hilly, narrow roads with its 25 mph speed limit. Islanders mainly walk or ride bicycles, and friendly hellos are commonly heard. Although satellite television is available on the island (maintained by VK9LH), we found better on the island. The songbirds alone were more entertaining! One evening we were enjoying a barbecue at a nearby beach when a large flock of mutton birds flew in from the sea, swooping just above our heads as they headed home to their nesting burrows tunneled beneath the palms.

What can you do on LHI? Be DX, of course. Or you may enjoy snorkeling, scuba diving, bush walking, mountain climbing, bird watching, glass-bottom boating, or fish feeding.

Fish feeding? Yes, indeed. One of the more interesting bits of local entertainment occurs afternoons at 4:30 when a resident wades into the cobalt waters of Ned's Beach carrying a bucket of tasty morsels. As a crowd gathers, the gentlemen casts his tidbits into the shallow surf and is immediately engulfed by a violent, boiling sea seething with hungry fish. Small sharks, too!

On the air as VK9LM

The Hoffman QTH is also the site of their family business, the Sea Spray Art Studio. Noelle is an accomplished artist whose paintings and watercolors of the island and its many colorful flowers are on display, along with Australian crafts and gift items. Their passion for gardening is evident in a glorious garden featuring dozens of unusual flowers and plants. Papaya trees yield tasty fresh fruits regularly.

The home office also includes Dick's Amateur Radio station, VK9LH. The main transceiver is an IC-270A, with a 500-watt amplifier feeding into a two-element triband minibeam. Several wire antennas complete the picture. Because of Dick's busy schedule, his operating time is limited to checking into local nets and some casual operating. I was invited to fire up the rig whenever we weren't being tourists, which seemed like a very reasonable arrangement.

During the five days in October 1999 that we were active as VK9LM, band conditions varied widely. Early on a solar flare wiped out the bands, and so it was off to the beach. Then, things picked up, and my operating focused on early morning and evening, when 20 or 15 Meters opened up to the States and Europe. Since I wasn't that familiar with Dick's rig, I kept things simple and worked simplex. When the pileups got too bad, I went by call areas. This worked well. The JAs were always workable, and I logged nearly 200, along with about 150 in North America.

When it was time to leave Lord Howe, I had worked 686 stations as VK9LM. About 83 percent were SSB contacts and 17 percent CW. Despite my preference for Morse code, there was more action on the phone bands for some reason. I had 591 QSOs on 20 Meters, 91 on 15 and only four on 10 Meters. QSLs for the operation should be sent directly to my home address: 9901 Cypress Circle, Mentor, Ohio 44060.

In addition to the enjoyment of being with friends in one of the world's most exotic locales, there was a feeling of satisfaction at having given a 'new one' to so many. When I returned home to begin filling out the VK9LM cards, I read many notes thanking me for having put Lord Howe Island in their logs. As a veteran DX chaser, I know the feeling. It was fun to add Amateur Radio to our family vacation — especially on Lord Howe Island.

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David Splitt, KE3VV

Club calls and FCC petitions

Well, it's time for tax forms, uncovering the deck furniture, and other delights of spring. Among the spring cleaning tasks of columnists is to sift through the past few months of e-mail and letters about the column and write about the highlights. This is also a way to take a break from writing about FCC restructuring! One of the topics that seems to have drawn a lot of attention was the January 2000 treatise on club call collecting. In that column, I asked for anyone who had a good reason to have more than one or two club calls to let me know. Dr. William T. Shipley (D.D.S., M.S.D.) who holds the amateur call sign N4WS, wrote as the Trustee of the Cookeville Repeater Association. His letter reveals the shiny side of multiple club calls.

Bill begins his letter about the CLUB CALL HOARDING HALL OF SHAME as follows: "I would have to agree with you. It is a shame that people abuse things that can serve a good purpose. I feel that Mr. Hollingsworth is the best thing that has happened to Amateur Radio in the last twenty five years." Not much to argue about there, especially Bill's kudos to Riley Hollingsworth. His e-mail next mentions that he was listed in the article as a member of the Hall of Shame, and offers an explanation for removing him. I have edited the e-mail down to the essentials, but the key elements are as follows:

"I feel that our club, the Cookeville Repeater Association (CRA), followed the procedures required by the FCC and has justifiable reasons for our club call signs. In my response to Mr. Hollingsworth I furnished information as he requested. The FCC records correctly indicate that I, as a trustee of the CRA, hold the club call signs listed for that association. I am not individually the CRA, but am one of four elected trustees and the only trustee to hold an Extra Class license. The applications for all license grants challenged by the FCC were filed in compliance with Part 97.7 (2) of the FCC regulations applicable for Amateur Radio clubs."

Bill's e-mail continues, "The CRA is made up of honorable people. We have not participated in any 'abuse of process' as reported in amateur news reports. We have researched the process for obtaining club calls including calling the FCC to inquire if it was acceptable to file for multiple grants at one time and were told requesting multiple grants is an acceptable practice. Based on that information multiple call signs were requested from and issued by the FCC."

The uses of the club call signs are detailed in the e-mail. "K4CP was requested for the mobile command post. Having a specific and unique call sign for operators to use in an emergency operation reduces confusion because when CAR amateurs hear that particular call (K4CP) they know that it is coming from the mobile command post. Ham radio operators we send to or who work at the National Weather Service requested K4OHX for use during several weather events. OHX is unique to the NWS Office that serves this area. KOHX is the header on all bulletins from our local Weather Service Office."

Each of the vanity call signs obtained by the CRA has a special use. Bill's e-mail says that "K4UAN is used for emergency nets and weather nets by the net control operators. W4EOC was obtained for our members who operate in the Emergency Management Agency Emergency Operations Center. This is a unique call sign for the Emergency Operations Center. We have an active ARES and RACES group with a weekly training net." Bill noted that several of the calls are 'memorials' to SK members (the call of the former member is used by the club) but still have unique purposes. For example, W4HPL is used by net control operators for weekly training nets. He concludes that "the intention of the Cookeville Repeater Association is to serve the public by assisting Emergency Services and the Weather Service in the most efficient manner possible."

Well it is hard to disagree with Dr. Shipley on any of his points. All of the multiple calls are put to use by a real club that has real members who meet regularly and use the calls to provide public service to their community. That, after all, is one of the most important activities of Amateur Radio clubs like

Amateur Radio Call Signs

The following shows the last call sign in each group to be assigned for each VE Region under the sequential call system as of 20 February 2000.
For more information about the sequential call sign system, see Fact Sheet PR5000 #206-S dated August 1996 or contact the Federal Communications Commission, Consumer Assistance Branch, 1270 Fairfield Road, Gettysburg, PA 17325-7245, toll free 888/225-5322

District	Group D Novice	Group C Tech/Gen	Group B Advanced	Group A Am Extra
Ø	KCØHFW	++	KIØRM	ABØJW
1	KB1EVD	++	KE1LW	AA1UV
2	KC2FYQ	++	KG2RB	AB2GX
3	KB3EQE	++	KF3DL	AA3TG
4	KG4GHY	++	KV4EF	AF4QS
5	KD5JFX	++	KM5WU	AC5TQ
6	KG6AHA	++	KR6DY	AD6JU
7	KD7HXG	++	KK7WC	AC7BX
8	KC8NUM	++	KI8JM	AB8ES
9	KB9VTP	++	KG9TC	AB9KF
N. Marianas	WHØABM	AHØBC	KHØIK	NHØP
Guam	WH2AOB	AH2DN	KH2UT	++
Hawaii	WH6DGE	KH7ZA	AH6QA	WH7G
American Samoa	WH8ABI	KH8DO	AH8AI	AH8R
Alaska	WL7CVD	KLØVS	AL7RP	ALØS
Virgin Island	WP2AIM	NP2DB	KP2CP	++
Puerto Rico	WP3NOT	WP3GL	KP3BM	WP3E

++All call signs in this group have been issued in this district.

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the CRA and probably the major reason that Hams enjoy the favorable use of the airwaves under the auspices of the FCC. Therefore, it is my pleasure to remove Bill and all of his (as trustee) call signs from the Hall of Shame and install him and the Cookeville Repeater Association as members in good standing of the Multiple Club Call Sign Hall of Fame. Keep up the good work, Bill (and CRA!), and thanks for being the exception that proves the rule. I am confident that the FCC will allow the CRA to keep their multiple calls signs.

Letter to the editor

Another letter to the editor received by ***Worldradio*** about the February 2000 Rules & Regs was from a reader who disliked both the tone and content of the column. Michael Berezowski, WA2ABF, of Haddonfield, NJ, writes, "I was extremely disappointed and angered at the sarcastic article about the ARRL ("ARRL Strikes Out With FCC") in the February issue. It dripped with sarcasm and in the final analysis did nothing to advance Amateur Radio. It was devoid of any solutions to problems that the ARRL was addressing... merely criticizing the organization. I hope that future articles by David Splitt will be more constructive, otherwise the value of ***Worldradio*** to Amateur Radio WILL BE DIMINISHED. I suggest that before he contemplates future articles he do some serious thinking before he sits down at his typewriter or word processor."

Well, as William Earnest Henley once wrote in his poem Invictus, "My head is bloody, but unbowed." My commentary about the ARRL's petition followed not only "serious thought" but also a thorough reading of the FCC documents and orders. I can't disagree with Mr. Berezowski (if someone writes a critical letter, can you call them "Mike?") on the tone of the column. It was somewhat caustic and while it may not have "dripped" sarcasm, it certainly did ooze some. Unfortunately the letter to the editor did not address the substance of my column and explain how the ARRL petition was a good effort at advancing Amateur Radio.

My biggest complaint with the ARRL in that column was twofold. First, the ARRL petition was not very well-conceived and presented rather weak arguments in favor of modifications to PRB-1, the FCC's long-standing order on preemption of local zoning and other ordinances that affect Amateur Radio operators. Rather than presenting specific rulemaking language for the FCC to consider, the ARRL petition was vague in its requests. Especially with respect to the requests for a minimum antenna height floor on local regulations and language prohibiting "unusual costs for processing antenna permit applications," the arguments proposed by the ARRL were, in my opinion, rather easy for the FCC to either refute or ignore. And this is exactly what the FCC did. While I hardly expect that any criticism

"The ARRL has been remarkably unsuccessful..."

I might offer of the ARRL petition will have any real impact on the ARRL or its leadership, the FCC was a far harsher critic — it denied ALL of the ARRL requests.

My second, and perhaps more vehement, criticism of the ARRL petition was that it included both a request for clarification of PRB-1 with a request for entirely NEW rulemaking. I refer, of course, to the portion of the petition that asks the FCC to preempt private restrictive covenants, such as the homeowner or condominium rules that prevent some Hams from erecting outdoor antennas. This is outside of the scope of PRB-1 and the FCC said so. It would require the FCC to issue additional rules that address private rather than public preemption issues.

I agree with the ARRL that the FCC has both the jurisdiction and authority to issue regulations preempting deed restrictions, condominium and coop covenants, and other non-governmental restrictions on property use where Amateur Radio operations are concerned. Even the FCC does not really deny that. They have just chosen not to make rules preempting non-governmental restriction. And this brings us to the next item.

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In the February column, I surmised that the ARRL might "keep up the facade of working on the problem with the FCC" by taking the easy road of filing for partial reconsideration of the FCC order denying that petition. I'm sorry to say that my prediction came true. I have read the ARRL Petition for Partial Reconsideration (several times) and, in keeping with Mr. Berezowski's advice, I have done some serious thinking about it.

First, it is important to understand that I agree with the ARRL's goal. The FCC should exercise its authority and issue a rule preempting condos and homeowners associations and other private entities from lumping Amateur Radio antennas in with grotesque wrought iron fences, hideous lawn flamingoes, and the over-reaching individuality of purple polka dot shutters. The issue is not whether the ARRL is right (as are the members of the ARRL and broader Ham community who want preemption in the private sector). The issue is how to get the FCC to act favorably.

The ARRL has been remarkably unsuccessful of late in getting things from the FCC for its membership. In the same February issue in which I discussed the dismissal of RM-8763, an article quoting the ARRL Report described the dismissal of three other ARRL petitions: RM-9259 (seeking the declaration that adherence to "voluntary" band plans is synonymous with "good amateur practice"), RM-9115 (expansion of RACES activities), and RM-9106 (to allow amateurs on American Samoa to transmit outside of the International Table of Frequency Allocations for their area). The results speak for themselves.... 0 for 4. If you accept the premise that the ARRL petitions the FCC to do things that are good for Amateur Radio, then it is possible to draw the conclusion that it is not the ARRL's goals that are faulty, but perhaps the methods it uses in pursuit of those goals.

So in next month's column, I will take a hard look at the ARRL's recently filed Petition for Partial Reconsideration. If you want to do that yourself, it is available on the ARRL website at the URL http://www.arrl.org/announce/regulatory/prb-1/prb1-recon.pdf. See whether you think the FCC will be persuaded to give private sector preemption another look. In any event, agree or disagree, I appreciate the numerous e-mails and letters I have received from readers. Keep 'em coming!

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PRB-1 bill introduced in California Senate

California has become the latest state to consider PRB-1 legislation. ARRL Southwestern Director Fried Heyn, WA6WZO, reports Senate Bill 1714 was introduced 23 February in the California Senate.

Like a similar PRB-1 measure passed last year by Virginia's General Assembly, the California bill would require localities to accommodate Amateur Radio antennas of up to 200 feet, according to local population density.

Echoing the language of the PRB-1 limited federal preemption, the measure says that local ordinances regulating antenna placement, screening or height "shall reasonably accommodate Amateur Radio antennas and shall impose the minimum regulation necessary to accomplish the legitimate purpose of the city or county."

Under the proposed bill, cities or counties with population densities of 120 persons or less per square mile (according to the 1990 U.S. Census) would not be able to restrict Amateur Radio antennas to less than 200 feet above ground. Localities having population densities greater than 120 people per square mile would not be able to restrict ham antennas to less than 75 feet above ground. In both cases, localities would not be allowed to restrict the number of support structures.

The bill stipulates that "reasonable and customary engineering practices" be followed in erecting Amateur Radio antennas. The bill would not preclude localities from regulating amateur antennas with respect to the use of screening, setback and placement, and health and safety requirements.

Heyn credited Michael Mitchell, W6RW, will helping to get the bill introduced, and he asked California amateurs and clubs to contact their state lawmakers to support the measure. — *ARRL Letter*

(Ed. Some additional information since this appeared in the ARRLL Letter — The bill will probably be assigned to the Energy, Utilities and Communications Committee of the California State Senate. That committee is headed by Senator Jim Brulte. We are fortunate to have Sen. Brulte as the sponsor, as his brother, Jim is WA6MNV, an active Amateur Radio operator in Sacramento. Once the bill is assigned to committee, we can begin our efforts to get this legislation passed.

***Worldradio** will keep our readers informed as to the progress of the bill through updates in the magazine and through our website at www.wr6wr.com. We urge all amateurs in the state of California to contact your representative to support this bill. Let's take advantage of this opportunity!)*

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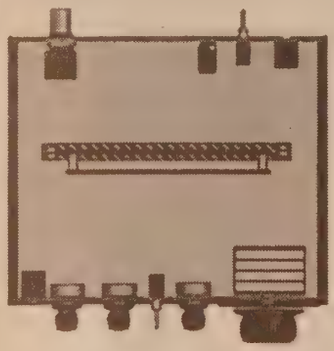

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Restructuring: death knell or golden opportunity?

John Harper, K6KSR

"It's now official," Humbert sighed as he tossed the computer print-out on my operating desk. "The FCC has now joined ranks with the nation's public education system in de-emphasizing the learning process. And it appears that the Amateur Radio Service could be headed for the big screen — as a sequel to "Dumb and Dumber."

Glancing over the sheets I had to agree. "Three license classes, five-word code and no waiting. Wha'hoppen?"

"It's all about numbers," my learned friend said. "And on that basis, the FCC restructuring is right on target.

"As far as the FCC is concerned, it'll take fewer people less time to manage the amateur spectrum. With regard to those who are constantly harping that there's strength in numbers, they should see a significant increase in new Hams. For the equipment folks it means a lot of RF gear rolling through their warehouses. For the license prep purveyors, a new crop of memorizers. It looks like a win-win situation for all concerned."

Of course, old Humbert couldn't really believe that we Hams had won anything. Or could he?

"You're referring to the larger pool of trained operators we hope to gain as a result of this easing of requirements, right?"

Humbert grinned. "Who said anything about trained operators? We're talking strictly quantity here — bigger is better, the more the merrier, and everybody-into-the-pool."

He was right, of course. The constant effort by hamdom's would-be saviors to recruit more and more licensees looks like it's finally paying off.

"We could see a virtual land-rush of test takers," Humbert said, "both newbies and upgraders. The scuttlebutt leans that way. I'm wondering how long it will be before the folks over at the ARRL begin reflecting on that old saw about "being careful what you wish for..."

More people in the pool seems to be the accepted solution for what ails Amateur Radio these days. Never mind that all those bodies thrashing around in the deep end make it easier to sink than to swim.

"Is the issue really one of dwindling numbers?" Humbert asked. "Or is that simply the symptom of Ham radio's real ills? Like a lack of dedicated interest in radio electronics in its traditional framework? Or is it an ever-diminishing skill level due to the free-ticket mentality of today's licensing policies? Maybe it's the growing anti-social attitude among Hams — the old hands angered by the influx of ill-prepared one button operators, and the newcomers resentful of being afforded a stature equal to that of a bottom feeder. There's a lot of ax grinding going on."

"So who's right?"

Humbret shrugged. "Both, I suppose. But I doubt that making it easier for a good talker to become a Ham is the answer. I think it's time we faced the cold, hard fact that as much as we love the hobby, it's not for everyone. So why do we feel we have to sell everyone we meet on the idea? Sure, we'll recruit some warm bodies who are curious. But it'll be like my Boy Scout days."

"I had no idea you were into campfires and short pants," I said.

"I could barely tie my neckerchief. I was a terrible Scout!" He sighed heavily. "I was in it strictly for the uniform. When you're twelve, it can be a real chick-magnet."

Uh, huh. It appears that we, as a group, have become so sapped of blood to the brain that we're supporting an effort to induct those who simply want to wear the uniform. Does this kind of "sign-'em-up-and-move-'em-out" enlistment mentality really aid in saving our bands, expanding our technology and enhancing our public service image and abilities?

Humbert shook his head. "I think we're simply going to be looking for a place to dump a lot of barely worn

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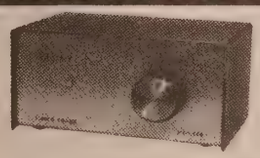

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uniforms."

Humbert picked up a connector from my desk and examined it. "There's the story about the novice Ham who went to his radio parts store to buy an 'AC259' connector — so he could plug his antenna into the wall outlet. After being laughed at a few times, you think he'll want to stay in the fold? After all, the dumbing-down of the process isn't his fault."

If history is any indication, most of the new recruits won't stick, or won't advance beyond their entry level license class. Yet, advancement has never been easier. One can go from a shave-tail, no-code Tech to Extra Class in a matter of days, if not hours. With the growing cadre of testing gurus, and 'speed schools,' the Ham ticket is within reach of anyone capable of memorizing a handful of multiple choice questions and answers. Add five words-per-minute of 'multiple choice' Morse receiving and you can be on your way to Extra faster than you can say, "ten-four good buddy."

The much-touted process of bringing new Hams on board with the promise of teaching them 'down the road' hasn't panned out either. The Elmer of old seems to have taken to the hills to escape the pandemonium. And the new Ham is left in the lurch — alone, his new ticket in hand while he talks into the back side of his microphone.

Humbert waved his arms wildly. "And right here is our opportunity," he practically shouted, "to turn things around. Because within that body of new ticket holders will be those who really have a genuine interest in Amateur Radio — in becoming better operators, in exploring all it has to offer. So we've got to spring old Elmer from the rest home and nurture these folks who do want to learn more. And at that point it really doesn't matter how they got their ticket."

"But a lot of would-be ops don't think Amateur Radio is — well, sexy." I replied. "How do we compete with the Net, cell phones and HDTV?"

"Could be that they haven't been exposed to the vastness of our hobby — things like packet, Amtor, satellites, microwaving and milliwatting. What about the experimentation opportunities in antenna design, digital communication and propagation, to name just a few. And there are construction projects, swapmeets and clubs to join. It's really a big menu with a wealth of things to sample."

"And that's going to save our frequencies," said I with a hint of sarcasm.

Humbert narrowed his eyes. "It certainly won't be those pseudo saviors who use the scare tactic of 'more bodies or less spectrum.' It's got to come from within — from experienced Ham teaching inexperienced Ham. Clubs should be appointing Elmers right now, setting up realistic learning programs on operating, as well as the technical side. Combine that kind of concern with an inertia that'll be stimulated by dedicated ranks, and our hobby will survive just fine."

He was right again. Ham radio, through its unique blend of fraternity, public service and true scientific contribution, has managed to survive World Wars, economic disasters — even federal deregulation. It's not a body that will go quietly into the good night. It will certainly change. We may lose more spectrum, we may gain some others. It's happened before. And we're still here.

"Perhaps," mused Humbert, "it's time to let Amateur Radio seek its own level — to let that positive inertia take over." He put on his hat and headed for the shack door. "Always remember," he said over his shoulder, "that bit about strength in numbers — it applies to smaller numbers, too."

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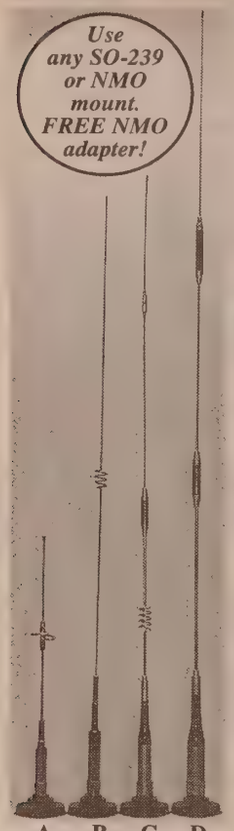

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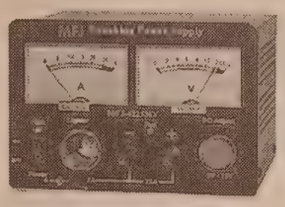

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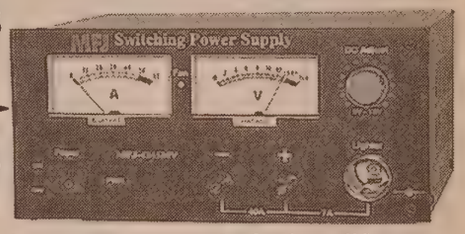

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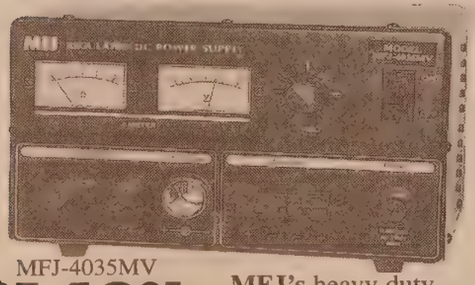

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Using a repeater, 101

Larry Wood, KC6TQQ

I enjoy listening to the different people who use the repeater every day. Families keeping track of members on the road to know they reached their destinations safely. Old friends keeping in touch over long distances that would otherwise be costly telephone expenses. People unfamiliar with an area seeking assistance to find a location or a good route to follow. So many reasons, and just plain enjoyment, to access and use the repeater.

While taking classes and studying for my license, and again for upgrading, I recall the instructors emphasizing the courtesy aspects of Amateur Radio and especially guidelines for repeater usage. As I listen to our repeater, I am reminded of some of those instructions and it seems good to share a few. Now, I know that everyone will not agree and that's ok too. There are no hard and fast rules here, just some suggestions as I remember them.

Plain Talk: Talking on the repeater is much the same as any other conversation, like using the phone, except that the conversation is your-turn and my-turn, one at a time. Forget most of the other jargon except when the path or contact is so poor that using a "Q" type code may be beneficial to ensure understanding, but try and keep it to a minimum.

Breaking In: None of us need to try and dominate the repeater. We should always allow someone with a priority to interrupt our conversation and use the repeater as they need. There are several good reasons to "break in."

1. Joining the conversation to participate in the round table discussions. In this case the best way to be recognized is to give your call-sign suffix right after the courtesy tone. If you have a very short suffix, it may be best to use your entire call-sign.

2. Adding a comment to clarify a point in question or input some information. Usually this person wants to enter the conversation temporarily and then exit. Often the person will say "comment" or "information" or give their suffix following the courtesy tone in order to be recognized.

3. Making a priority call is another good reason for breaking into a conversation. Due to time constraints it may not be feasible to wait until the repeater is free. Giving your suffix after the courtesy tone will get you access to announce your intent, make your call short and quick, thank the other parties and exit. They may even invite you to continue with them.

4. An emergency call is always a valid reason for breaking in. This may be to report an accident, ask for roadside assistance or other similar situations. Using the single word "break" after the courtesy tone will alert the other parties of your emergency and they will gladly stand by, or even assist if they can, until your needs are met.

5. Extreme emergency or health and welfare calls are always top priority. Using the words "break break" following the courtesy tone should get you full control of the repeater for as long as needed. Depending on the extent or type of emergency, a control operator my want to take over to ensure proper coordination of the emergency situation.

Checking our signal readability: (Not usually a good reason for breaking in!) I think this one is overused, but from time to time we may question whether new or modified equipment is working properly. For most users, accessing the repeater's "S-Meter" function may suffice in most cases. Giving your call-sign and requesting a "signal report" should get you a response as to the readability of your transmission. Remember, the other person is hearing the signal strength of the repeater and not your radio so they can really only report on your transmission's readability. If distorted, noisy, fully readable or somewhere in between, someone will usually give you a pretty good idea as to how you sound.

"CB" Terminology: Old habits are always hard to break, and we are getting better, but we should forget those old "10" codes and other similar phrases when becoming Hams. "Kerchunking" the repeater: Keying the microphone just to hear if we are getting into the repeater is a common misuse. Let's announce our call-sign and say something, like "KC6TQQ testing" or similar. You may even get a response from a friend or make a new one.

Well, I suppose that there are many more that could be mentioned but these are the major ones I notice during the course of a day's listening to the repeater. Like I said, it isn't a matter of hard and fast rules, sometimes it is just good courtesy. We all make mistakes and we all learn and improve with active participation.

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RSGB International HF & IOTA Convention - 1999

John F. W. Minke, III, N6JM

Late last year we attended our first Amateur Radio convention abroad, the annual RSGB International HF and IOTA Convention the weekend of 08-10 October at the Beaumont Conference Centre in Old Windsor. Organized by the RSGB HF Committee in conjunction with the RSGB HF Contests and RSGB IOTA Committees and the Chiltern DX Club, it was a well-run and put together convention. Neville Cheadle, G3NUG, was the Chairman for this year's event.

It's interesting to note the convention is offered as a package deal in that you pay one price that includes the convention, meals and housing. No separate hotel accommodations are required.

The evening amounted to a social event: the IOTA Drinks Reception and Buffet. At the conclusion of the dinner, various IOTA awards of appreciation were presented. These included the "Most Courageous IOTA DXpedition of the Year," awarded jointly to Barry Bettman, K6ST, and Thomas Attwood, W6IXP, for their efforts to activate Sledge Island (NA- 210) and Little Diomede Island (NA-150) off the western Alaskan coast. Another was the "Most Outstanding IOTA DXpedition of the Year" (Africa, Asia and Europe) which was awarded to the Chinese Radio Sports Association, with special recognition to Alan Kung, BA1DU, and De Hao Yang, BA7JA, for the many new islands they activated. The final award, another "Most Outstanding IOTA DXpedition of the Year" (North and South America, and Oceania), was awarded to Jim Smith, VK9NS, for his Pigeon Island (OC-065) operation as H4ØAB.

Jim Smith, VK9NS, and Roger Balister, IOTA Manager. IOTA Reception on Friday evening.

All of Saturday morning was devoted to the IOTA program, with the first session on IOTA program developments followed by questions and answers. This initial session was narrated by Martin Atherton, G3ZAY, who turned it over to Roger Balister, G3KMA, who updated us on the IOTA developments. Roger announced a new IOTA Directory will be available this coming April or May. It will be a complete revision and not a re-hash. Much of the island groups were based on atlases that were really incorrect. The directory will also include a list of additions and deleted islands. Another feature will be the inclusion of valid calls for most of the rarer

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Left: David Hendon, Chief Executive of the Radiocommunications Agency presents Mark Haynes, 2AØAPH, the Young Amateur of the Year award.

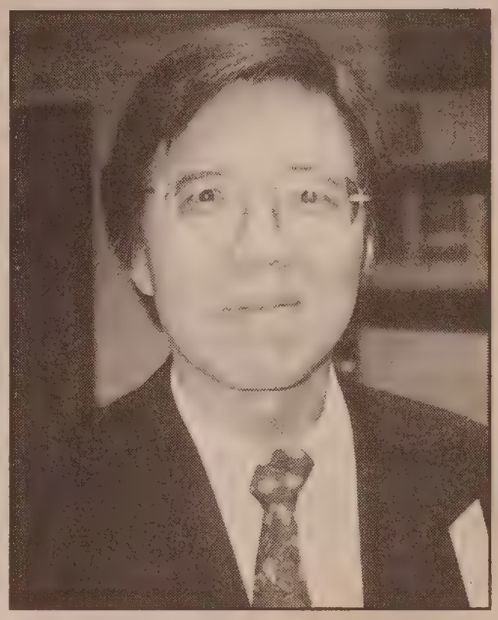
•

Below: Jim Nakajima, JA9IFF, from Japan, who detailed activity from Japan in the IOTA program.

IOTA islands that have been activated.

Roger suggested those island stations check the IOTA Directory before including the island reference number on their QSL card. Roger suggests sending him an e-mail if not sure. Please include the island name on your card, and if it is foreign, please use the original name. Please include the reference number on the card.

Continuing with the IOTA program, Mike Crownover, AD5A, discussed the newly formed Island Radio Expedition Foundation (IREF), which was created to help fund IOTA DXpeditions that normally would be excluded from DX foundations, such as the Northern California DX Foundation. Mike said the amount of support given will be based on the amount of time spent on the DXpedition with incentives such as the number of contacts made and how soon the QSL cards will be prepared and sent out. The foundation was initially started with a group of IOTA chasers from the 5th U.S. call area and has now spread to those outside the area. They have a tax exempt status.



They have a website (www.sat.net/~iref) with an application for support. Any funding will usually be made after the operation has been completed. The board of directors includes such well known calls as G3NUG, CT1EEB, JA3AER, W9DC, and others. The IREF presently has 24 or 25 members and is looking for additional membership.

The IREF has so far funded $500 to BI7Y (AS-143); $500 to VK9RS (OC-230); $300 to VK9NSB (OC-229); and $150 to MMØBPP (EU-118).

The next speaker was Jim Nakajima, JA9IFF, who discussed the IOTA program in Japan. Jim said that during the period 1994 to 1999 the number of IOTA chasers in Japan has grown from 6 to 121, and he expects it to reach 150 by next year. They now have their own website. Jim then discussed the various Japanese IOTA DXpeditions with projected QSL cards on the screen, which were well appreciated by those in attendance.

Following a short intermission, Martin Atherton, G3ZAY, talked about his recent IOTA DXpeditions, including going to Australia this past spring where it's easy to obtain a license (he was issued VK4CAY). These included such places as Green Island (OC-172), Thursday Island (OC-138), and Granite Island (OC-228). Martin finished up his little tour on Santa Catalina Island (NA-066) just prior to going to the Fresno DX convention.

Another IOTA presentation was the DXpedition to Gabon by Ken Frankcom, G3OCA, who discussed his visit to very rare Ile Banie (AF-043). The last time this one was activated was back in 1986.

The final presentation for the morning IOTA program was the 5Z4LI DXpedition to Lamu Island by Phil Whitchurch, G3SWH and John Linford, G3WGV. John mentioned going through customs where the agent noticed the ski bag with the comment: "skiing in Kenya?" A total of about 11,000 contacts were made.

There were two presentations beginning the afternoon session. One of them was about 1999 Solar Eclipse Propagation Experiment and the other was the C21SX/C21ZM Pacific DXpedition presentation by Roger Western, G3SXW, and Bob Henderson, G3ZEM. Actually, Bob was the speaker, who began with the question, "Why choose Nauru?" His answer was that it was rare in Europe, especially on CW; it was a faraway exotic place; and you could get there by air.

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Over 20,000 contacts were made (which included duplicate contacts). This averaged out to 1,250 per day or 111 per hour. 8,000 QSL cards have been received. Of that 90 percent were direct requests and 10 percent were e-mail requests for return via the bureau.

We then switched gears and went up to the Gardenia Room for the LF Forum narrated by John Gould, G3WKL. No, this wasn't a forum for 80 or 160 Meters, but rather the 73 and 136 kHz bands, unavailable to amateurs on this side of the world. This was a rather informal gathering and the RSGB Experimental Award, the Nevada Cup, was presented to this year's winner, Dave Pick, G3YXM, by Mike Devereux, G3SED, of Nevada Communications.

The final session covered Saturday afternoon was the 5V7A Contest DXpedition to Togo by Roger Western, G3SXW. His group, referred to as the Voodoo Contest Group, has been well represented in the last *CQ* Worldwide DX Contests. He discussed how they put together the group, the contest, and why they chose to go to Togo.

He also mentioned the various high scores during the past years, such as in 1994 at 9G5AA operation, organized by the Phoenix group for SSB. They left the equipment behind for Roger's group to use in November on CW, finishing in first place. Returning from Benin (TY5 operation) via bus in 1995, they discovered a good location in Togo. Thus the Voodoo Contest Group was born and they operated as 5V7A the following year for the highest score ever from Zone 35. They returned to Togo to fire up 5V7A for the next two years. In 1998 they came in second, but did receive the "All Time Africa Award" for their efforts.

The banquet was well done, with Brendan O'Brien, GØUCT, as the Master of Ceremonies. Following the dinner they had the typical pileup contest, but on "PHONE." A member at each table had a call written on a card taped to the bottom of his chair. That person would start screaming the call. The object was for attendees to see how many calls they could copy. The smart ones got up and ran around the room trying to get the calls.

The Sunday morning sessions began with Bill Kennamer, K5FUV, discussing the latest with DXCC 2000.

I did pop into the SWL Forum, which was narrated by Bob Treacher, BRS32525. Bob said that he had been an SWL since the 1960s and is interested mainly in SSB. He said there are SWL types who do listen on CW. It was interesting to hear that many SWL types are licensed amateurs, but only care to listen.

Following lunch we decided it would be interesting to attend the "Young Amateur of the Year" presentation in the Orchid Room, narrated by Peter Kirby, GØTWW. Several officials were present, including the families of the two recipients. The first recipient was the runner up, Daniel Keene, G7GIK. Mark Haynes, 2EØAPH, was selected the winner for this year's award.

Daniel King, G7GIK, the runner up, is 15 years old and a member of several clubs. He was active in special event contests. Mark Haynes, 2EØAPH, is involved with the running of code classes and can copy at 25 words per minute. He has also written articles and has had them published in the December 1998 issue of *Practical Wireless.*

In conclusion, Peter thanked the RA for their support in the Young Amateur of the Year program. The Novice license has proved highly successful as an entry level into Amateur Radio, and into electronics for many people, with well over 6,750 candidates completing the course, many having upgraded from their initial Novice class license.

The HF Contest Trophy Presentation was made at the end of the conference. Each winner was announced by Chris Burbank, G3SJJ, Chairman of the HF Committee, and awarded by Hilary. After the presentation all recipients gathered outdoors for a group photograph.

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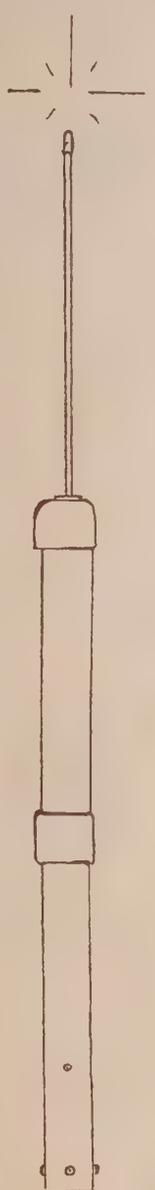

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Does your mobile radio make you feel stupid?

Mike Meltzer, K2SDD

Most mobile radios are so complicated they are nearly impossible to operate while the user is involved with the important task of safely(?) driving a car. This is a result of two radio characteristics that Hams, shopping for the best mobile radio, view as very important: 1. Many features, also known as bells and whistles. 2. Small size, so the rig will fit in today's smaller automobiles.

The designers know that they must keep the numbers of space-occupying pushbuttons to a minimum, and that means each button must control multiple functions. This is done two ways (although occasionally a third technique is used that I shall mention later). Whether the button is held for a short time (momentarily) for a long time (about one second) will allow a single button to activate two different operations.

Another technique is to use a 'Function' button. If this function button is pressed immediately preceding the pushing of the operation button, the operation will be changed and an alternate use of this operation button will occur.

Now imagine yourself driving in traffic and attempting to change the frequency offset from plus to minus. Even if you do remember which is the correct button that will perform this operation, will you recall if you should press it momentarily or for a full second, or must it follow the function key or be used without the function key? If you have been keeping score, you will realize that each operation button can do up to four operations. Can you remember which is which? Not me.

What I have not told you yet is that the function key can select multiple features depending on whether you press it momentarily or for a full second. This means that a single operation button can control up to six operations. Obviously there is not enough space on a button to label the six different uses for that one tiny key. So, they do not label it, and it is up to you, the user, to either memorize them (good luck) or to read the manual each time (I thought you were driving the car). But wait, it gets worse.

A dual-band rig will have about twice as many features to control as a one-band radio, but size is still improtant, so they sure can't double the number of keys. What do they do? They require the user to activate additional functions by holding various buttons as he powers up (turns on) the radio. Of course, this means that you must first turn off the radio. So now each button can control up to seven features. Don't forget to look at the road every once in a while because remember, you're driving. People who buy these mobile radios end up feeling that they are stupid. I bet even the average genius can not handle one of these thing and drive a car simultaneously.

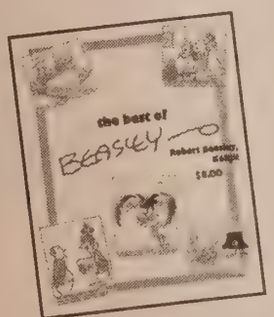
There are many fancy features that the average Ham can live without and still be very happy. Do you really need the feature that checks every 15 seconds to see if your friend who owns a radio like yours is nearby and warns you with a beep if he is out of range? Do you need the function that puts out a ultrasonic sound to repel mosquitoes? Or the squelch that can only be opened by the correct tone? These things sell radios, but most owners never use them.

Some day, sit down with your radio (or its operating manual) and make a list of the minimum features that a mobile radio would have to have to satisfy you. The emphasis here is on minimum. The smaller the number, the less complex the radio would be and the easier it will be to operate. I'll get you started.

I would like to see a very big readout with numbers that can be read so easily that I would only have to take my eyes off of the road for a fraction of a second. This may mean a larger size radio but I can live with that. I want at least 50 watts on high power with lower power levels selectable. Direct frequency from a tone pad located on the microphone. At least 100 memories. Public service band receive. PL-tone transmit. Squelch and volume adjusted with standard rotary knobs. Real S-meter. Repeater input/output reverse switch. Memory scan — I can get by without full frequency band scan.

I think you get the idea. We tend to buy radios that are so complicated and confusing that they make us feel stupid, discouraged and inadequate. What is really needed by a Ham who must operate his radio and his automobile simultaneously is a very basic, easy to see, easy to operate radio. If we would buy them, they would make them. But we don't always do what is good for us. And we don't always buy what we really want.

What about you?



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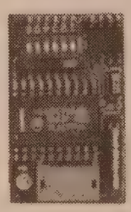

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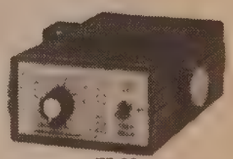

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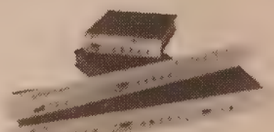

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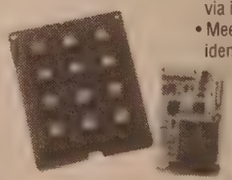

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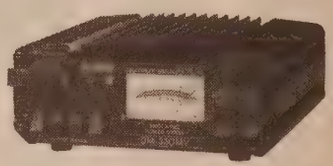

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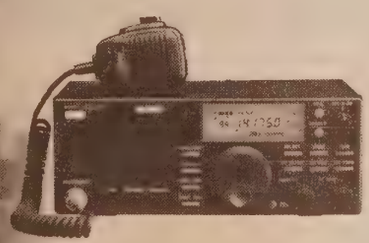

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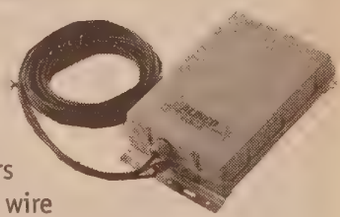

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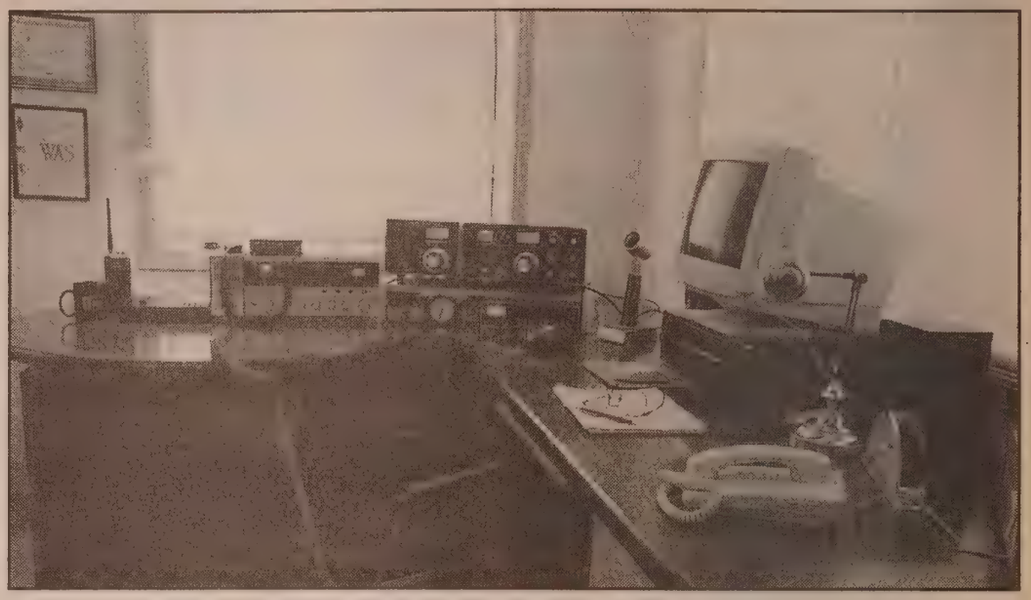

Steven Meyers, WØAZ

Recently my XYL and I built a new home in the country. For the first time, there is plenty of room for antennas, and for the first time I have a shack! We built an office for me in the garage, a place where I can blast CW through the speaker without driving everyone in the house nuts.

The cherry desktops were salvaged for free from a renovated bank. Resting on inexpensive file cabinets and scrap lumber, the whole desk assembly cost less than $75 and looks like a million bucks. The antenna feed is ladder line, and it will soon enter the shack via porcelain feed-through insulators mounted to a panel in the wall behind the radios. In order to get back on the air quickly, I have temporarily fed it through a foam spacer in the sliding window.

Licensed as a child, with the novice call WV2ZWZ, I used to drool over the magazine pictures of older Hams with their wrap-around desks and Collins "S" Lines. Well, I never managed to get the Collins rig, but the old Yaesu "Fox Tango" works fine. It was modified by my good friend Jim Scott, W9KV, for the WARC bands — and I did finally get that wrap-around desk.

Amateur "Hi"

*Ever had a funny or strange experience with Amateur Radio, on or off the air? If so, type it up (or print neatly) and send it to us for consideration in our monthly AMATEUR "HI" contest. You could win a free year's subscription to **Worldradio**!*

What's his name?

Joseph Plesich, W8DYF

Several years ago, before cable TV, some 6-meter rigs really tore up channel 2. One day, during this time period, a local Ham was coming into one lady's TV about S9+. She had little patience and was so annoyed that she called the police to complain.

"This man," she told the police, "is talking right through my television set, and I want you to do something about it right now."

Supposedly, she was told that even if they could do anything about it, there was no way of knowing who the man was.

To digress for a moment, the suffix of the Ham's call that she was hearing was IGO and he was using the phonetics "Item George Ocean. So, naturally, she told the police that the man was so brazen that he even keeps repeating his name over, and over again.

"Well, what was his name?" she was asked.

"It will be easy for you to track him down," she replied. "He keeps saying, 'I'm George Ocean.'"

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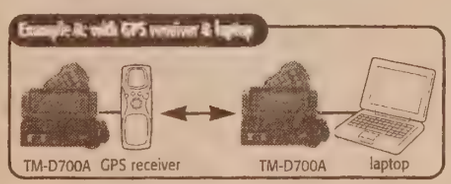

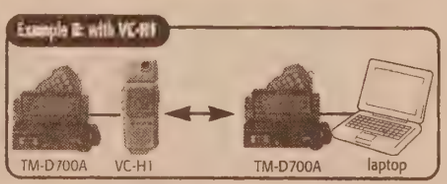

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Awards

Contact All Time Zones

To help commemorate 25 years of ***Worldradio***, we announced an award known as "Contact All Time Zones" (CATZ).

• Rules

The start date for valid contacts is 01 July 1996 at 0000Z.

The world is divided into 24 time zones. Each time zone is 15 degrees wide. For the sake of this award, half-hourly zones and out-of-zone artificial time changes will be ignored.

This award is based on the true 15 degrees each, world map 24 time zones.

The applying station must have one (two-way) contact on Amateur Radio allocated frequencies with a station in each of the world's 24 time zones. Contact with one's own nation does not count.

The operator applying for the award must have made all 24 contacts from a location within the same country.

The award may be endorsed as the applicant wishes in regard to band and/or modes.

• Application

The applying radio operator must be in possession of 24 QSL cards, one from each of the time zones.

A list shall be made showing each contact's call sign, date, band, mode and the time zone starting with the prime meridian (0°) and moving eastward.

There is a fee of $5 to cover the cost and mailing of the 8 x 10 certificate (mailed unfolded).

It is not necessary to mail your QSL cards to ***Worldradio***. Send a statement signed by two other licensed radio amateurs (General Class or above) that they have inspected and verified the required QSL cards.

Address applications to CATZ Award, ***Worldradio***, 2120 28th St., Sacramento, CA 95818.

Recipients of the CATZ award will be announced in the ***Worldradio*** DX column.

Special Events

SUBMARINE SERVICE 100TH ANNIVERSARY

April marks the 100th anniversary of the commissioning of the USS Holland, the U.S. Navy's first submarine. To celebrate this occasion, several submarines currently restored as museum exhibits will be on the air on the weekend of 29/30 April. Subs that may be on the air are the Albacore, Aluminaut, Batfish, Becuna, Blueback, Cavalla, Clamagore, Cobia, Cod, Croaker, Drum, U505,

Growler, Ling, Lionfish, Marlin, Nautilis, Pampinito, Requin, Silversides, S51 at Vladivostok, Russia, Torsk and numerous submarine memorials around the country. In addition to these boats, efforts are being made to have some active duty subs on the air.

Hours are variable, depending on hours the memorial submarines can remain open. Most of them will be on the air from morning until the museums close on both days. Suggested frequencies are 3.843, 7.243, 14.243, 21.343 and 28.443 MHz SSB. Suggested CW frequencies are 3.543, 3.743, 7.043, 14.043, 21.043, 21.143, 28.043 and 28.143 MHz. All frequencies are +/- 20-40 kHz, depending on QRM.

Amateurs interested in this event can check into the Submarine Veterans net held every day except Sunday on 14.243 MHz at 1700Z or 7.243 MHz on Saturdays at 0100Z. Last minute information is available on the web at www.flash.net/~jflanders. Additional information about the group is available from Jim Flanders, 1539 California Trail, Plano, TX 75023-4300, e-mail; jaf@sprintmail.com, or from Carl Raish, KGØHS, 1873 So. Tennyson St. Denver, CO 80219, e-mail; kg0hs@juno.com.

GIG HARBOR

The Peninsula Amateur Radio Emergency Team will operate KA7EOC in support of the 6th annual Gig Harbor Health and Safety Expo in Gig Harbor, WA. 1400-0200Z Saturday 08 April. Frequencies: 14.080 (CW), 14.280, 28.380 (SSB), 146.560 simplex. For certificate, SASE to Mark Yordy, KC7BBO, P.O. Box 712, Wauna, WA 98395-0712.

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HERBERT G. JOHNSON, W6QKI

Herb Johnson, W6QKI, who founded Amateur Radio equipment manufacturer Swan Electronics in the 1960s, died 01 February. Johnson, who lived in Cardiff, California, was 79 and had been in ill health for several years. According to Gary Smith, VE4YH (proprietor of the VE4YH Virtual Swan Museum, http://www.pcs.mb.ca/~standard/), Swan Electronics, then Swan Engineering, began during the winter of 1960-1961 as a one-man operation with Johnson, then W7GRA, building the first 10 Swan SSB rigs in a garage in Benson, Arizona.

Swan moved to California in 1962 and became a subsidiary of Cubic Corporation in 1967. Amateur equipment production continued until around 1979. In its heyday, Swan cranked out some 400 transceivers a month from its Oceanside, California, plant. Swan also manufactured station accessories.

Johnson subsequently formed Atlas Radio, which produced solid-state transceivers, including the popular Atlas 210. — *ARRL Letter*

JAMES H. VIELE, W1BRG

Former Vermont Section Communications Manger James H. Viele, W1BRG, of Burlington, died 02 January. Viele served as Vermont's SCM from 1972 until 1976. During his professional years, he rose to become president of Vermont Hardware Company. He also was active in church and community affairs. He was a member and past officer of the Burlington Amateur Radio Club. — *W1SOV, ARRL Letter*

FERDINAND W. SCHOR, K6HPB

Former Chief Engineer of the Hallicrafters Company, Ferdinand W. Schor, K6HPB, died 14 January 2000, in Santa Barbara, California. During World War II and the years following, Schor was responsible for the design of many of the Hallicrafters products and receivers, including the S-40, SX-42 and SX-62. — *KD3GA, ARRL Letter*

JIM LARSEN, K7GE

The founder of Larsen Antenna, Leland J. "Jim" Larsen, K7GE, of Vancouver, Washington, died 03 February. He had been a Ham for more than 67 years. He was a contester and DXer, enjoyed CW, and was a member of the First-Class CW Operators Club. Paul Nyland, K7PN, described Larsen as an "experimentor and mad scientist." — *K7PN, KU7Y, ARRL Letter*

WILBUR E. "BIP" BACHMAN, W6BIP

Well-known San Francisco-area amateur and contester Wilbur E. "Bip" Bachman died of heart failure 02 February at his home. During his working years, Bip Bachman was employed as an electrical engineer at Ford Aerospace. An ARRL member for nearly 70 years, Bachman also was an active member of the South Peninsula Amateur Radio Klub in Palo Alto. "Bip" Bachman was an active CW operator, and W6BIP was a familiar call sign in the ARRL November Sweepstakes and many other contests. — *W6NOE/SPARK, ARRL Letter*

ROSEMARY WILLIS, KF6EKP

Rosemary Willis, KF6EKP, one of Southern California's most interesting Amateur Radio operators died 08 January 2000. She was one of the people responsible for sorting QSL cards for the 6th call district for 25 years. Rosemary was also the Secretary-Treasurer of the L.A. Area Council of Amateur Radio Clubs for 12 years.

Rosemary was a member of the San Fernando Amateur Radio Club for 33 years, serving as editor of the *W6SD Carrier*, the club newsletter, making sure it got to the printer, and doing the folding and mailing. She was the recipient of numerous awards from the club and was named an Honorary Life Member in 1982. She received the Outstanding Service Award from The Council of Amateur Radio Clubs, 1973-1985. Amazingly, Rosemary accomplished all of this before she became an Amateur Radio operator! She was licensed in 1996.

She was married to Archie Willis, W6LPJ, for 54 years. Rosemary's other love was for the Los Angeles Dodgers. She was a regular feature at Dodger Stadium and was a member of the Dodgers Booster Club. — *WB6EDE*

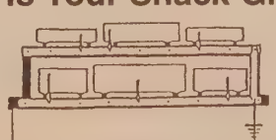
DAWN CUMMINGS, K1TQY

Women Radio Operators of New England President Dawn Cummings, K1TQY, of Keene, New Hampshire died 02 February. An Amateur Radio operator since age 15 , she was an avid traffic handler and the Region One net manager. Her call sign also graced the "Keene Machine" — a local repeater on 146.805 MHz she managed. Cummings was active in SKYWARN and served as an official weather observer for the Keene Sentinel and other outlets and participated in a regional weather net. She also was an active ARES member and belonged to the Quarter Century Wireless Association. "Dawn was always cheerful and polite, on and off the air," said Scott Porter, N1SP. "All who knew Dawn are saddened at the loss. She tirelessly worked for our hobby, and never sought the limelight." In addition to her Amateur Radio activities, Cummings was a Red Cross volunteer. She owned and operated Anything But Common, a consignment craft store in Keene. — *KA1YLN, N1SP, ARRL Letter*

LORRY EVANS, KA1KQY

Former ARRL Circulation Manager Lorraine S. "Lorry" Evans, KA1KQY, of Flagler Beach, Florida, died 26 November 1999 after a short illness. Lorry retired in 1986 after more than 16 years of service at ARRL Headquarters. "Lorry's dignified, but fun-loving nature carried over to all of her friends and colleagues," said former ARRL staffer John Nelson, KØIO. — *KØIO, ARRL Letter*

Is Your Shack Grounded?



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Letters to the Editor

Ashamed...

I read the article called "We should be ashamed of ourselves" in your January 2000 issue. I also noticed a letter to the editor in your February 2000 magazine when the person agreed with the article and felt as though the world of Hams was not a particularly friendly place. I would have to strongly disagree. Having just gotten my ticket about 5 months ago, people went out of their way to help me. My friend/teacher, Jerry Boyd, K6BZ, generously donated his time to help me start off on the right foot and he still continues to help me to this day.

During the first week of operating, I would just say something along the line of "Does anyone want to chat" and I would almost always get a response. Everyone in my community has helped me to grow tremendously in my knowledge of Amateur Radio.

I have never once felt left out and the local clubs have always welcomed me to join or just come to a meeting and visit. One of the clubs even gave me a prize, which was a one year subscription to this magazine!

I realize some towns may not be as friendly and helpful as mine, but couldn't that be changed? Spread the spirit of kindness around! If nobody helps you, reach out and help someone else. I have faith in this hobby, and if we all do our part to make Amateur Radio a better place, before you know it, this will be one of the most popular hobbies of the new millennium!

Amy Morris, KF6YNT
Palo Cedro, CA

(Ed. You are indeed fortunate to have Jerry Boyd as your Elmer, Amy. Jerry has a passion for Amateur Radio that is infectious. He always encourages new amateurs and is the model for all Elmers. His enthusiasm for the hobby has spread throughout Trinity and Shasta counties, and he has passed it along to you. Keep up the good work in Amateur Radio, and Thank You for passing along your experiences to our readers.)

•

In response to some recent letters complaining about ill treatment to newcomers, I would like to comment. I apologize for any ill treatment that you received from Amateur Radio operators. I have not found these experiences to be the same as mine. I am 53 and I've been a Ham for about two years. I worked my way up to Extra Class and am now a VE for the ARRL. I work hard to get new Hams involved in the hobby. I got on CW when I passed the 5 wpm and stayed with it. I received much encouragement from old timers and worked all states in one year. The Fists club would be glad to have you. I would encourage you to get involved in serving others. I have found the real joy in life comes from serving. Become an "Elmer" to new Hams. There are a lot of new Hams out there wanting to make contacts who would love to talk to you. Keep a positive attitude! I and others would love to work you on the radio. Don't get out of Amateur Radio — you will hurt yourself and no one else.

Lawrence Posey, AC5TN
Dumas, AR

•

I read with some concern the "Jimmy K." anonymous letter in your January issue. I expect others will comment on the general tone of rejection. I must speak up for San Antonio, the only city named while the individual was "traveling." In writing this, I will assume that the letter is not fiction and is not a tale spliced together from anecdotes.

I'm flat embarrassed that no one answered the distress call. However, there is a very important assumption made by the writer — that someone was listening. For some time now, no single San Antonio repeater has had sufficient users that there is full-time monitoring of any channel. There is, of course, no requirement that anyone do so. But, overall occupancy is down, way down! Other 'travelers' often report making trips in other states and working no one.

I only monitor VHF during a 45 minute drive to and from work. While at home in the shack I monitor one VHF and one UHF machine. I can assure you that I would have answered for directions, help with car trouble or whatever.

Whether we use the pro-word "MAYDAY" in these circumstances is debatable. Message precedence is always set by the originating station. Nonetheless, false distress signals can be dealt with harshly — so choice of this precedence is a weighty decision.

Years ago, I was on I-10 heading for the 34-94 site to work on it. I was in radio contact on 34-94 with others at the site, located in a building with telephones on every floor. I ran out of gas. No one offered to make a phone call to get me some gasoline. Guess I need to apologize for those guys, too!

If the author of this article actually lives in this area, he is welcome to contact me for help in finding an "Elmer" who might guide him back to the wonder and excitement of Amateur Radio. My telephone number is listed.

Lawrence S. Higgins, W5EX
San Antonio, TX

Restructuring

I am irked at the two letters published in the March 2000 issue concerning the restructuring of the amateur service. The attitude taken by WA2RZF and KM6CQ are exactly what is wrong with the amateur service. The no-code technician license has absolutely nothing to do with the so-called 'lids' that occupy the bands today. All you need to do is listen to the phone segment of 75 Meters. The idiots who reside up here have all passed a 13 or 20 wpm CW examination.

I can assure you, the demise of the amateur service began long before the no-code technican license. There are many things that I consider contributing to the demise — the chief being our inability to listen. Yes, you hear what's coming out of the speaker of your radio, but you did not listen to the DX station say they were listening only for stations with a 4 in the call sign. The fact that you reside in the 4th call district with a 2nd call district call sign does not qualify for a station with a 4 in the call sign. I speak from experience as I have run DX operations in Iceland (KD5YF/TF 1983-84), Korea (HL9YG 1986-87) and a short operation on Wake Island in 1997. The well behaved and professional operators were those with the KA and KB 2-by-3 call signs.

(Continued on page 65)

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W-100-N

The following DXers recently completed the necessary requirements for *Worldradio's* Worked 100 Nations Award:

562. Arthur J. Schultz, Sr N2UHI 04 January 2000
563. Ira S. Gottfried K6IRA 04 January 2000
564. John R. Harvey W9CY 27 January 2000
565. Kevin M. Regenhard KA2NUE 27 January 2000

I might add that Ira's list of contacts, 115 of them, were all made during the year 1999. In fact, Ira said he worked over 200, but not all were confirmed. I have included a special endorsement of "All Worked in 1999."

CATZ

And, for the CATZ award, Contact All Time Zones, we have:

15. Michael R. Weber WA2RZJ 04 January 2000
16. Russ A. Wilson VE6VK 27 January 2000
17. Theodore N. Smith W1TPB 27 January 2000
18. Joe Nemecek KØJN 27 January 2000

Agalega & St Brandon (3B6)

Here is some more information on the multi-national DXpedition to Agalega Island (AF-001) that was mentioned in last month's column, thanks to Bernie McClenny, W3UR, of *The Daily DX*.

All preparations for the DXpedition are running according to plan. On 01 October 2000 the Swiss crewmembers are due to fly to Mauritius where they will meet with the members of the other seven nations. After a one-day meeting, about three tons of equipment will be prepared for shipping to the island. On 05 October the team will travel to the island and on the same day the camp will be set up, including the impressive antenna system and the tents.

The DXpedition will come on the air on 07 October signing with 3B6RF on all bands, for 16 days of operating around the clock in order to make sure all deserving DXers make their contacts. Hence the chances of little guns establishing a contact in the second week are very high. On 23 October the DXpedition to Agalega Island will shut down.

The budget for this operation is 160,000 (CHF) and strongly depends on sponsoring and contributions in all respects. You can actively support this expedition by donating generously to: UBS, P.O. Box 757, CH-6301 Zug, Switzerland; Account Number: 273-246454.01X for Swiss Francs or 273-246454.60F for U.S. funds, with the remarks, "Agalega Expedition." For further information please contact: Joe Meier, HB9AJW, at e-mail: 100450.540@compuserve.com.

Kenya (5Z)

Phil Whitchurch, G3SWH, and five other DXers will activate Wasini Island (AF-067) in Kenya in March. Two stations will be active on a 24-hour basis for CW and SSB. Their target is 15,000 contacts and will commence operating on 08 March for eight days.

Burundi (9U)

According to the *Ohio/Penn DX Bulletin* Gus Jagero, 9U5D, is presently active from Burundi and should be there through the end of March.

Juan Fernandez (CEØ)

If you missed the recent CEØZ operation from the Juan Fernandez Islands (SA-005) you may have worked the group of German DXers in February that was to be on during the latter part of the month.

And *The Daily DX* reminds us of another group of Finns from mid-March. They plan to operate between 17 March 08 April. The operators will use their homecalls/CEØZ. The team will have three complete stations on all bands with a goal of 40,000 QSOs. The budget for this operation is $12,000, not including QSLs and the operators are looking for financial support. If the operation falls through they will return all funds. For more information contact Keijo Loisti, OH2BOZ, Jaalankatu 11, FIN-04430 Jarvenpaa, FINLAND. You may e-mail them at keijo.loisti@novogroup.com or fax to +358 9 5067 2270. The Aktia Bank of Finland also has an account set up, 405567-230447.

Mayotte (FH)

Presently active from Mayotte Island (AF-027) is Christian Saint Arroman, 6W1QV, signing with FH/TU5AX. His operating habits include 6 through 40 Meters and should be active through the end of May.

Clipperton (FO)

Almost mid-January an announcement was made by John Kennon, N7CQQ, that he would head up a DXpedition to Clipperton Island with operations beginning on 01 March. Unfortunately, only those with internet capabilities will have been informed of this in time. There were to have been four stations operational for one week.

Tromelin Island (FR/T)

The Lyon DX Gang will head for Tromelin Island (AF-031) this summer, probably in August. The plans for this one were orginally for Glorioso Island, but due to some administrative changes the group will go here instead. The plans call for two weeks of operating three stations by four operators. They will be on all bands, 6 to 160 Meters, with CW, SSB and RTTY.

The group is presently looking for sponsors. Please contact Erwann Merrien, F6JJX (f6jjx@easynet.fr), or Gil Gautier, F5NOD (f5nod@easynet.fr), for further information.

North Korea (P5)

Armond Noble, N6WR, and John Minke, N6JM, were active as P56WR from this one on 02 March. Unfortunately due to last minute plans, advance notice of this operation was not possible. They used an old Korean War era military rig, an AN/GRC-9. This

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was especially nostalgic to John as he made his first CW contact ever with this radio. However, due to operating restrictions, John had to do the cranking while Armond operated CW only. In the three hours of operation, Armond made 17,642 contacts. If you were one of the lucky ones, send your QSL request to ***Worldradio***, 2120 28th St. Sacramento, CA 95818, attn: AFOOL QSL.

Jan Mayen (JX)

Per-Einar Dahlen, LA7DFA, says he will once again be active and working from Jan Mayen Island (EU-022) starting 07 April as JX7DFA. He will be there for either 6 or 12 months this time. Plans include activity with his 144 MHz EME station, and other bands, 6 through 160 Meters. While there he hopes to make the first Jan Mayen to U.S. contact on 6 Meters. Thanks to *The Daily DX* for this information.

Chesterfield Islands (FK)

Tim Totten, N4GN, informs the DX community of the upcoming DXpedition to the Chesterfield Islands (OC-176) and the next new DXCC entity. The islands are part of New Caledonia and located at 19.52S and 158.19E.

Tim states that the Association des Radio Amateurs de Nouvelle Caledonie (ARANC), the Amateur Radio society of New Caledonia, reports that the Chesterfield Islands DXpedition remains on target for the window of 15 March through 01 April, 2000. A more detailed schedule will be announced in future press releases. The New Caledonian telecommunication authorities have issued the distinctive call sign TXØDX for this multi-national DXpedition.

The DXpedition vessel is the M/V *Night Crossing*, a brand new 75-foot cruiser, that made its maiden voyage just last summer. The Chesterfield landing permission requires that the ship be cleared through customs at Port Koumac in New Caledonia. Direct entry to the Chesterfields from Australia was denied. This caused the DXpedition team to make several logistical changes, all successfully completed.

The team will operate from two sites, far enough apart to allow simultaneous CW and SSB operation on the same band. Four HF stations will be active on all bands, using CW, SSB, and RTTY. A separate station will be dedicated to 6 Meters.

As the Coral Sea typhoon season is still very active during March, weather is likely to play a major role in this DXpedition. Several special arrangements have been made in this regard. You can follow the weather in the Chesterfield area by using the links from the TXØDX web site at http://www.n4gn.com/tx0dx/.

Ogasawara (JD1)

Very active from Ogasawara is JD1BKR, who plans activity through April of this year. He is located on Iwo Jima (OC-030).

Svalbard (JW)

According to *425 DX News* LA9FJA is active from Svalbard with JW9FJA and should be there until late this summer.

Myanmar (XZ)

The Central Arizona DX Association again went to Myanmar for another DXpedition, this time operating from Thahtay Kyun Island (AS-144), a new one for IOTA chasers.

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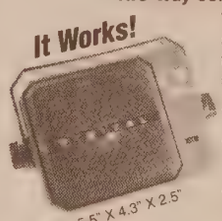

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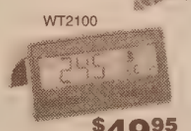

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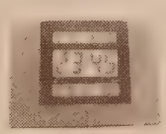

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After more than a week of operating the XZØA team made approximately 36,000 contacts, evenly divided between SSB and CW.

The final week of operation consisted of only six operators. Fifteen of the team members had left and went to Yangon and some of them operated with the calls: XZ1DB (Dan Brown, NA7DB); XZ1YL (Sally Brown-Marinez, KM5EP); XZ1L (Luis Chartarifsky, XE1L); and XZ1ZV (Rich Chatelain, K7ZV).

No doubt not everyone worked them on all the desired band/modes, but I'm sure that most of the deserving DXers worked them for a new one, a new IOTA, or a band/mode filler.

A few years back there was the questionable XZØRR operation from Myanmar that was accepted by the DXCC Desk. Later, they advised DXers, although they would not rescind credit, to work Myanmar again. This operation should have satisfied this!

IOTA

Takeshi Funaki, JI3DST, will be active from Koshiki Islands (AS-037) from about 17 to 20 March. He plans to be on 10, 12, 15, 17 and 40 Meters SSB. He has activated several Japanese IOTA groups recently for the deserving IOTA chasers.

The following IOTA operations have provided acceptable validation material to the IOTA committee during the month of December:

AS-032 JI3DST/6	Osumi Archipelago	(Nov 1999)
EU-066 RK3DZJ/1	Solovetskiye Islands	(Aug 1999)
EU-147 RK3DZJ/1	Razostrov Island	(Aug 1999)
EU-147 RK3DZJ/1	Ravluda Island	(Aug 1999)
OC-088 9M6PWT	Borneo	(Nov 1999)
OC-164 VK6NU/P	Rottnest Island	(Jul 1999)
SA-073 OA5/F6BFH	San Gallan Island	(Nov 1999)
SA-073 OA5/F5TYY	San Gallan Island	(Nov 1999)
SA-073 OA5/F9IE	San Gallan Island	(Nov 1999)

And, here is our January 2000 selection of the IOTA activity for the month:

AN-006 EM1KGG	Galindez Island	19 Jan
AN-015 8J1RL	Ongul Island	05-31 Jan
AN-016 CE9/R3CA	Antarctica	02-17 Jan
AN-017 FT5YG	Petrels Island	08 Jan
AS-005 RAØBK	Dickson Island	14-22 Jan
AS-006 VR2FD	Hong Cong Island	09 Jan
AS-008 7K3EOP	Miyake Island	16 Jan
AS-015 9M2TO	Pinang Island	15-27 Jan
AS-017 7J6CCU	Okinawa Island	17 Jan
AS-017 JS6PXB	Okinawa Island	14-31 Jan
AS-023 JE6EMW	Amani Archipelago	03-19 Jan
AS-024 JR6USF	Yaeyama Islands	25 Jan
AS-030 JD1BKR	Iwo Jima	02-23 Jan
AS-032 JA6CTW	Yaku Island	09-29 Jan
AS-040 JH6TYD	Goto Island	08-20 Jan
AS-045 HL5FUA	Ullang Island	02-30 Jan
AS-047 JM4NFJ/6	Minami Daito	26 Jan
AS-049 JI3DST/6	Tokara Archipelgo	01-08 Jan
AS-053 HSØ/IK4MRH	Phuket Island	15-30 Jan
AS-083 RA9LI/9	Belyj Island	07-27 Jan
AS-105 HLØY/2	Kanghwa Island	14-16 Jan
AS-136 BD4ED	Chong Ming Island	06-19 Jan
AS-144 XZØA	Thahtay Kyun Island	12-30 Jan
EU-008 GM3SWK	Isle of Skye	15-18 Jan
EU-009 GMØHTT	Orkney Islands	23 Jan
EU-009 GM3IBU	Orkney Islands	08-16 Jan
EU-010 GM3PPG/P	South Uist Island	01 Jan
EU-010 MMØBJG	South Uist Island	08-21 Jan
EU-010 GM3JIJ	Isle of Lewis	18 Jan
EU-016 9A3NY/P	Korcula Island	22-23 Jan
EU-016 9A4DU/P	Korcula Island	21-23 Jan
EU-016 9A4KF	Hvar Island	21-24 Jan
EU-016 9A6DX/P	Korcula Island	21-23 Jan
EU-016 9A2GF	Brac Island	04-27 Jan
EU-029 OZ/DK1BT	Tunoe Island	01 Jan
EU-029 OZ1CQX	Falster Island	15 Jan
EU-037 SM7CRW	Oland Island	20-25 Jan
EU-037 SM7DLZ	Oland Island	16 Jan
EU-038 PAØPXB	Vlieland Island	14 Jan
EU-038 PA2JJB	Texel Island	16 Jan
EU-042 DK8OL	Isle of Sylt	02-23 Jan
EU-046 LA1CI	Ringvassoey Island	23 Jan
EU-046 LA5QFA	Vanna Island	20 Jan
EU-047 DJ9IN	Norderney Island	13-17 Jan
EU-049 SV8CYV	Samos Island	02 Jan
EU-049 SV8CRI	Lesvos Island	06-23 Jan
EU-049 SV8DCY	Lesvos Island	08 Jan
EU-052 SV8CS	Zante Island	06-13 Jan
EU-052 SV8EP	Kefalonia Island	19 Jan
EU-055 LA7QIA	Karmoy Island	16 Jan
EU-055 LA2BKA	Reksteren Island	16-28 Jan
EU-057 DL4PM	Ruegen Island	20-29 Jan
EU-057 DL1UU/P	Hiddensee Island	01 Jan
EU-067 SV1CU/8	Tinos Island	06-26 Jan
EU-070 TM5CRO	Porquerolles Island	29-31 Jan
EU-075 SV8IM	Poros Island	02-21 Jan
EU-075 SV1TP/P	Poros Island	07-10 Jan
EU-082 U1ZA/A	Kildin Island	08-09 Jan
EU-098 DL2BUE/P	Poel Island	23 Jan

DX Prediction — April 2000

Maximum usable frequecy from West Coast, Central U.S. and East Coast (courtesy of Engineering Systems Inc., Box 939, Vienna, VA 22183). The numbers listed in each section are the average maximum usable frequencies (MUF) in MHz for contacting five major areas of the world centered on Africa—Kenya/Nairobi, Asia—Japan/Tokyo, Oceania—Australia/Melbourne, Europe—Germany/Frankfurt, and South America—Brazil/Rio de Janeiro. Smoothed sunspot number = 142. Chance of contact as determined by path loss is indicated as bold ***MUF** for good, plain MUF for fair, and in *(parentheses)* for poor. UTC in hours.

CENTRAL U.S.A.

UTC	AFRI	ASIA	OCEA	EURO	SO AM
8	17	15	***30**	14	***21**
10	*(22)*	***14**	***25**	***21**	***20**
12	30	***20**	***22**	***26**	***30**
14	34	17	***21**	***29**	***36**
16	***36**	15	20	***28**	***41**
18	***37**	*(13)*	18	***27**	***43**
20	***34**	23	35	***24**	***45**
22	***28**	***27**	***42**	19	***43**
24	***24**	***28**	***45**	***14**	***41**
2	***22**	25	***44**	***13**	***34**
4	***22**	***21**	***44**	***17**	***28**
6	20	18	***36**	***15**	***24**

WEST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
10	16	***17**	***27**	14	***23**
12	25	***15**	***24**	22	20
14	32	***19**	***20**	***27**	***30**
16	35	***19**	20	***27**	***37**
18	***36**	***22**	19	25	***41**
20	***34**	***30**	***34**	23	***44**
22	***29**	***31**	***42**	19	***43**
24	25	***31**	***45**	14	***41**
2	***22**	***29**	***45**	***18**	***33**
4	***22**	***26**	***43**	***20**	***28**
6	21	***23**	***39**	17	***24**
8	18	***19**	***32**	15	***21**

EAST COAST

UTC	AFRI	ASIA	OCEA	EURO	SO AM
7	***23**	15	***27**	***14**	***22**
9	25	***13**	***24**	***21**	***20**
11	***36**	***21**	***21**	***26**	***29**
13	***41**	18	22	***29**	***35**
15	***43**	16	20	***29**	***40**
17	***42**	14	*(19)*	***28**	***43**
19	***37**	21	28	***26**	***44**
21	***31**	26	39	***22**	***43**
23	***26**	***28**	***44**	***17**	***41**
1	***23**	25	***43**	***15**	***34**
3	***19**	***20**	***39**	***13**	***28**
5	***26**	17	***32**	***16**	***24**

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I have been working at the IOTA 2000 Millennium Award and was confused about working island groups for regular points and premium points. Neville Cheadle, G3NUG, clarified this for me saying that you can only make two contacts with each island group, one for three premium points (in the specific month), and for one regular point in any other month. Therefore, you can collect a total of four points for a particular island group during the year 2000. For further particulars on the award visit the website at http://www.cdxc.org.uk.

Most Wanted

Carl Smith, N4AA, has released his survey of the 100 most wanted DX entities with the results published in his *The DX Magazine*. His results were classified into eight individual lists; World-Wide, Europe Only, World-Wide with no Europe or U.S.A., Overall U.S.A., Eastern Time Zone U.S.A., Central Time Zone U.S.A., Mountain Time Zone U.S.A., and Pacific Time Zone U.S.A. For our purposes only a portion of the fourth, Overall U.S.A. will be shown.

Pos	Prefix	Entity	1998 Rank
1	P5	North Korea	1
2	BS7	Scarborough Reef	3
3	A5	Bhutan	2
4	VU4	Andaman and Nicobar Islands	6
5	7O	Yemen	5
6	VU7	Lakshadweep Islands	8
7	3Y	Bouvet Island	13
8	VKØ	Macquarie Island	12
9	FR/G	Glorioso Island	9
10	FR/T	Tromelin Island	7
11	YA	Afghanistan	19
12	FR/J	Juan de Nova	14
13	3CØ	Annobon	68
14	VP8	South Sandwich Islands	48
15	BV9P	Pratas Island	4
16	SV/A	Mount Athos	11
17	EP	Iran	20
18	ZS8	Marion Island	21
19	CEØ	San Felix Island	33
20	VP8	South Georgia Island	25
21	YI	Iraq	22
22	FT8W	Crozet Island	34
23	9U	Burundi	61
24	YK	Syria	24
25	E4	Palestine	--

It's interesting how the ranking has changed since the previous year such as for Annobon. In the Eastern Time Zone this one is ranked 16th and was 17th last year; it is ranked 15th in the Mountain Time Zone and was 84th the previous year. This does sound strange doesn't it? Perhaps a brand new bunch of DXers have arrived in Denver? Or just more taking the survey than last year.

The survey has been an annual thing that has been around for several years and I believe was orginally started by the late Chod Harris, WB2CHO/VP2ML.

New DX Editors

Carl Smith, N4AA, editor of *QRZ DX* and *The DX Magazine*, has assumed the role of DX editor for *CQ*. Carl fills the void of Chod Harris, VP2ML/WB2CHO, who became a Silent Key in December 1999. It is also interesting to note that Chod had previously edited *The DX Magazine* prior to selling out to Carl some years earlier.

And, Rick Olsen, N6NR, has accepted the invitation to be the editor of the "DX Forum" column for *73 Magazine*. Rick says that he is quite excited about editing the column. Rick resides in Issaquah, Washington, and is a member of the Western Washington DX Club.

DX Dinner

The Southwest Ohio DX Association will host their 15th annual DX dinner on Friday evening, 19 May 2000, at the Crowne Plaza Hotel in Dayton. The event begins with a cash bar at 1830 and the dinner at 1915. Tickets cost $31.00 each and must be purchased in advance from Steve Bolia, N8BJQ, 7354 Thackery Road, Springfield, OH 45502. Make your checks payable to SWODXA and include an SASE for ticket return. Steve can be reached at 937/788-2803 or e-mail at n8bjq@erinet.com.

DXpeditons

Tony DePrato, WA4JQS, a team member of past DXpeditions posted some interesting comments on the DX Reflector recently that include the following:

"I would just like to say that over the years most of the time we as amateurs have been able to get permission to go about anywhere we wanted, island wise. Yes, there are places we have not been able to go. But, as the world has become more aware of things like world warming, etc., the researchers have found that they have researched about everything but the most remote areas, and the rest of the world is now able to travel to these remote areas, go ashore, sight see and return to the ship leaving the place UNTOUCHED by their visit. What has happened is the researchers have few places left to go and study. Now they want areas of the world set aside for their research with no one allowed there

unless he is a part of their group. Believe it or not our world is a fragile place and we need to know this before some of us go running off to an island and leave our canned goods and trash there. We here in the States are very bad for this. Just look what we have left in Antarctica. No wonder that a group calling itself Antarctica 2000 has formed and wants restrictions placed on the islands and are trying to remove the junk piles that have been left there. We are our own worst enemies at times.

"I, for one, have thought that we as DXers and DXpeditioners need to work together as a single group to show the governments of the world that we can be responsible and can go safely and without harming the environment to these remote islands. We need to pool our resources, as the research groups have done, and work together. The egos between groups and DXers has done more to harm us than the research groups working to place these islands off limits has. We need to stop the infighting, back-stabbing and 'we are going to beat the other group there and show them' type of thinking. Let's start thinking about Amateur Radio and not ourselves and our egos for a while. If we start working together as one group and reach out to each other for knowledge and help then just maybe we can reverse some of the damage done as of late and get groups on some of these islands. I really feel that it is not WHO goes but that SOMEONE goes! I would like to offer my resources and my help to all DXers. I feel like I can speak for the entire South Sandwich group when I say our resources and knowledge is there for anyone who needs it. With that said maybe now is the time to stop and think what can I offer or do. We, as Hams, are a vast group made up of people from all walks of life. There are Hams out there who know who to contact and how to do it to help get landing permission and get the restrictions rescinded. Stand up and help. 73 Tony, WA4JQS."

Silent Key

Ken Holdom, ZL2HU, of the Kermadec DX Association, reports that Ron Wills, ZL2TT, died 29 January 2000 at approximately 5 p.m. NZT.

Ron played a significant part in the organization and planning of the DXpedition to Raoul Island, Kermadec Group, in May 1996. He is survived by his wife, Win, ZL2GI.

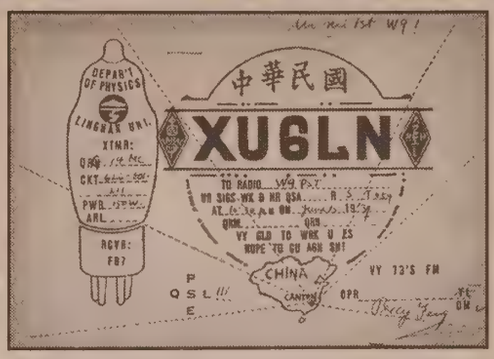
Antique QSL Department

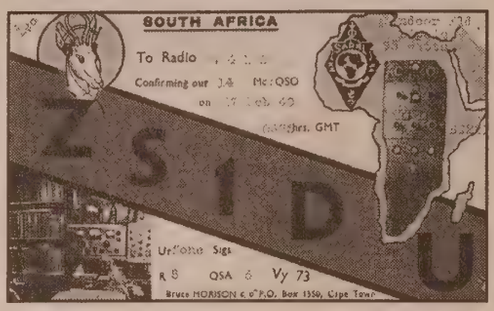
For our April issue I dug deep into my files for these cards. Not necessarily antique but they are unique. Not counting the specially designed DXpedition QSL cards, many an amateur had cards printed that were different. This included cards with photos of their equipment or some other sketch not found on any other cards. I have included several cards as examples.

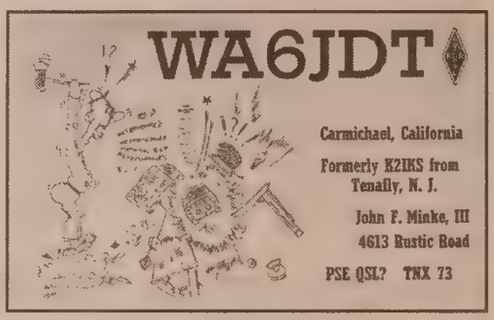
The first card was provided by Bob Truhlar, W9LNQ, that came from the collection of the late Roy Weisbach, W9UX. The call XU6LN was that of the Department of Physics, Lingnan University, Canton, China. Notice how the card has been laid out with the vacuum tube. The date of the contact was 15 June 1937 with the operator listed as Percy Feng, who says that Roy was his first W9. This particular card has been run at least two other times over the years in my column.

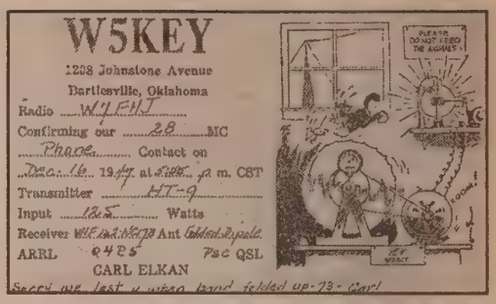
Leo Haijsman, W4KA, provides the ZS1DU card from South Africa. The operator, Bruce Morison, included a photo of his equipment on his card. This card was for a contact back on 27 February 1949. The call ZS1DU has been reissued.

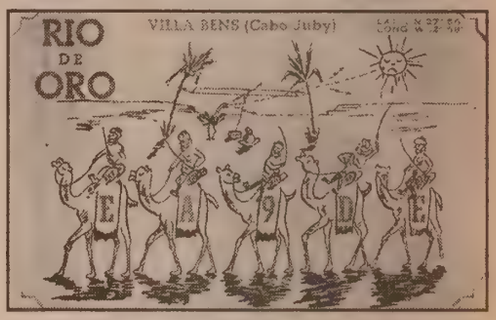
Then there are those types that use cartoons on their cards for whatever reason, such as the one for WA6JDT











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smashing up his equipment in frustration of not being able to work North Korea, screaming "heterodynes, heterodynes, nothing but heterodynes." Or such as the card for W5KEY of Bartlesville, Oklahoma, provided by Orv Bailey, W7QPT. This card dates from 1947 and came from the collection of Paul Young, W7FHT, a long-time friend of Orv. Both gentlemen are now Silent Keys. As for W5KEY, the operator, Carl Elkan, still holds the call and remains in the same town.

Another cartoon style card is that from EA9DE of the deleted entity of Rio de Oro, that was added to that list back in 1976, but can now be claimed for Western Sahara credit. Dave Kennedy, N4SU, provides this card.

The card for W6BXB, depicts the port city of Stockton, California. Also provided by Orv Bailey, this 1936 card shows ships and trains. However, this is a bit exaggerated as Stockton didn't have such rail service as indicated, even though it was served by five different railway lines at the time, each with their own terminal facilities. Interesting card, though. As for the operator, Pop Noack, he is no longer licensed and is probably a Silent Key.

QSL Information

Bill Schuchman, W7YS, says that he is the QSL Manager for UA9FAR for U.S.A. stations only.

Mustapha, DL1BDF, has been appointed the official QSL manager for the two Tunisian calls, 3V8BB and 3V8ST, by the Association Tunisienne des Radioamateurs (ASTRA).

Charlie Harpole, K4VUD, passes on this bit of advice and says, "Be advised that most mail sent to 9N1AC in Kathmandu, Nepal, is arriving slit open or not at all. The slit envelopes are usually empty. If you must QSL to him direct from the USA, try the U.S. Post Office extra-cost sticker which is yellow (not registered, not return requested, but some other catagory I can't remember the name of, but the sticker that goes on the envelope is yellow). This yellow sticker has worked for me mailing from USA to Africa and personal mail to Nepal... so be advised."

Charlie also reports on his calls of 9N1UD and 9N7UD, HSØZCW, and XW1UD. All direct QSL requests for 9N1UD and 9N7UD have been completed. Also, all contacts made prior to August 1999 have been answered either direct or via the bureau. Cards for HSØZCW have also been answered, except for about 40 direct requests that need answering. Charlie is presently working on the requests for XW1UD.

If you have not received any of these cards yet, send again or wait some more. Please do not ask him if in the log; he does not have time to provide that time-consuming service. Charlie says thanks for your patience, for your funds enclosed, for your SASEs and SAEs, and for having your call sign on the same side of YOUR card as your info!!!!!

Cesar, PY2YP, President of the CW Sao Paulo Group (CWSP) informs the DX community that Alan Cheshire, VKØMM, has nominated CWSP as his QSL manager for the one day AXØLD operation from Macquarie Island and declines to accept any excess monies from the QSLing process. Instead, he requests that stations wishing to obtain a AXØLD QSL each make a small donation to cover the postal costs, the remainder to be donated to a nominated charity.

CWSP will be supplying and covering the costs of printing the QSL cards and has nominated the Children's Cancer Hospital of Sao Paulo as the recipient. At the end of the QSLing process, all incoming monies minus postal costs will be presented to them with a card saying "From the international Amateur Radio community as a mark of thanks to Alan Cheshire who operated from Macquarie Island as AXØLD on 26th January 2000."

CWSP will also make public the accounts. Any extra donation you may wish to make to the Children's Cancer Hospital of Sao Paulo will be sincerely appreciated.

Please send your QSL requests direct to the Sao Paulo CW Group, PO Box 7068, Sao Paulo SP 01064 - 970, BRAZIL

QSL Routes (additions to list published following this old goat's column).

EI8IM --N9TGR

Thanks go to the following contributors for this month's column: G3NUG, PY2YP, K3ZO, K4VUD, N4SU, W4KA, N6FF, N6NR, K7WX, N7CQQ, W7QPT, W7YS, N9TGR, W9LNQ, Western Washington DX Club (WAØRJY), Northern Arizona DX Association (W7YS), WebCluster (OH2AQ), *425 DX News* (I1JQJ,), *The OPDX Bulletin* (KB8NW), *DX-News* (NJDXA), *The Low Band Monitor* (KØCS), *The Daily DX* (W3UR), and QRZ DX (N4AA).

How are your millennium awards coming? Obviously, the two most popular are the ones for DXCC and IOTA and neither require QSL cards. Why not join in the fun and chase away? Here at N6JM at the end of January my DXCC count was 66, and with the major DX contests the required 100 would soon be reached. 73 de John N6JM.

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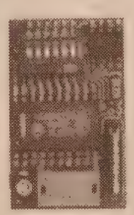

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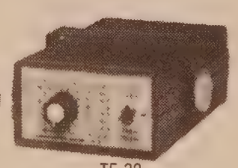

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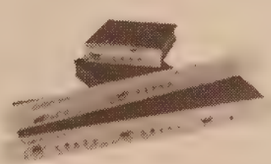

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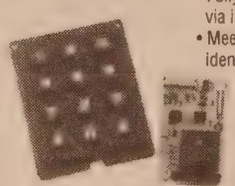

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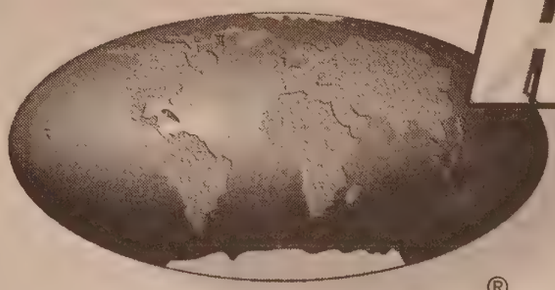

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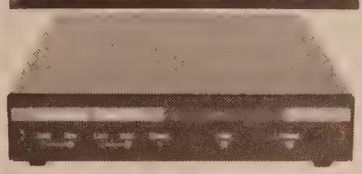

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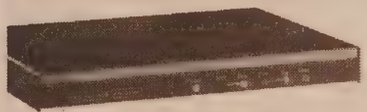

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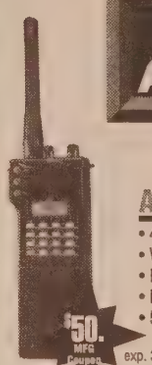

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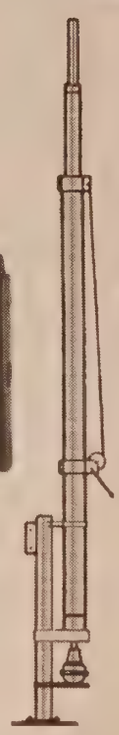

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Safe Battery Handling

The big news as I'm writing this is the amateur license restructuring. We may not like all the changes, but I am sure that HF mobile operation will gain from them. A lot of my friends obtained Technician class licenses prior to 1987 when the written test was identical to the General. These folks will be eligible for an upgrade to General with no further testing. They are seasoned operators, more familiar with mobile operating than most HF-only Hams. I am encouraging them to get on HF mobile. The post-1987 Techs that I know can also be a credit to Amateur Radio after they upgrade under the new requirements.

I received two very helpful e-mails on the 'battery in an enclosed space' question. The first is from Steve Bosbach, KG5BR:

"I couldn't help responding to your query on batteries in a closed space. I have been running HF mobile for years in VW camper vans and have run both gel cells and wet cells in the passenger compartment. On a previous VW I used a set of solar panels making 45 watts to charge the gel cell through a pulse width modulated charge controller. The gel cells are probably the best compromise for safety, but they don't like the charge rate from the vehicle alternator. I also wanted something I could hit pretty hard with a plug-in charger when I had shore power. For this I use a deep cycle marine wet cell battery of around 100 Ah. To solve the outgassing problem, I use Hydrocaps that take the place of the normal battery vents. These are special catalyst battery caps sized to your battery and charge rate. The catalyst material in the caps convert hydrogen and oxygen into water and drip it back into the battery cell. Less water is used under hard charging and no hydrogen in the battery compartment. A side benefit is less corrosion on the terminals due to acid weeping past the vents. They are available for most wet cell batteries from Hydrocaps, 305/696-2504. I think I paid $6.00 each for the caps, so a set of 6 will set you back a chunk of change, but they are worth it."

The second message on batteries was from Bob Voyt, WB8QCY:

"I solved the problem by going to gel batteries. They're a little more expensive but can be mounted in any direction and require no maintenance. To keep them from failing prematurely, you MUST charge them to a lower maximum voltage than lead acid batteries. If you want the Cadillac of sealed batteries, consider the Concorde AGM Deep Cycle Battery. More information can be obtained At www.windsun.com/Batteries/AgmTech.htm."

Fuel pump noise

Jumping right into the next (old) subject, Bob also said, "Solved my fuel pump noise problem on my '96 Suburban. Installed a new special fuel pump. Somewhat expensive but took care of the noise."

I hesitated to put out the Ford phone numbers that Clarence Arndt, W6DFG, had sent me for fuel pump noise problems because they might have been outdated. I wanted someone to check them first. The first one asking was Greg LaHaie, K7YDL, so I sent him the two numbers. Greg replied that one number was no longer valid, but went on to say:

"Arnie Nielson at 313/845-7565 is the RFI guy all right. Immediately sent all info on Ford's filter solution to fuel pump: Part # F1PZ-18B925-A RFI filter, used on a wide range of vehicles. He sent complete info on installation (unfortunately, does require removing the pump from within the fuel tank, estimated shop time: 1.8 hours). The info is on the Ford Company's INTERNAL web site. He's not sure if it can be accessed from the world wide web. He is very congenial and would answer anybody's questions. Thanks for the lead. I am sure I will pursue having my local dealership install this kit as soon as possible to solve a bad RFI situation. (at least 5 S-units of noise)."

Arlie Blankenship, NH6SO, sent in an interesting "snake oil" (his words) fix:

"At freeway speeds, the radio was unreadable. A call to Ford revealed they had never heard of any owners having noise on their transceivers. (Right) I tried capacitors, toroids, shielding, grounding, and you name it. At this time I also needed a better speaker. I ordered the ClearSpeech Speaker from NCI. (I think it is under a new company now.) *(See ad on page 29 this issue.)* The price almost scared me away. This will sound like 'snake oil.' Every bit of noise is gone. That simple. At 70 mph there is absolutely no noise on our HF rig. I don't

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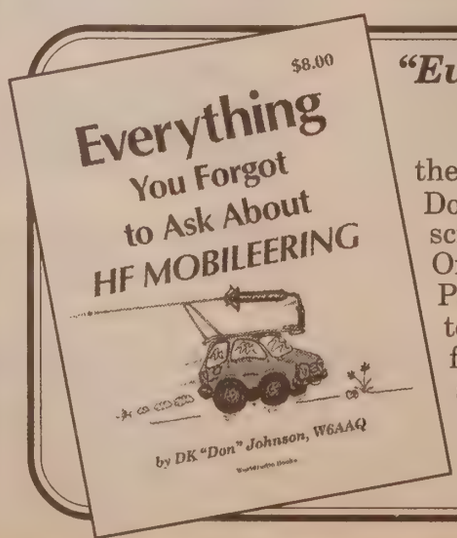

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know how it works, don't even care. But it is magic. Ian, KI7QX, has the same setup as us in a 1998 Ford F-150 V-8 engine. He also had ignition noise. He bought the same speaker, and voila His noise disappeared. I wouldn't guarantee it works for everyone, but I had reached frustration level in trying to solve my noise problem. What good is a mobile rig if you have to stop to use it?"

From a different noise fix, we turn to a different noise problem. Ray Telkamp, KØRNT, says:

"I have a 1995 Ford F-250 with the Navistar diesel engine. I mounted a TS-50 and Hustler, including what seems all the grounding, etc., necessary. (I have operated HF mobile for several years in different rigs.) There is a noise very similar to spark ignition, most objectionable on 14 MHz but tapering off in either direction. I have isolated the power source, used snap-on chokes on the power cable and coax, and a capacitor to ground at the antenna. Conversations with Ford Motor and Navistar resulted in an opinion that the noise is generated by the electric control leads to the injectors or by the injectors themselves. Again, I have installed chokes where possible. Using a sniffer of RG58, it seems the whole pickup body is radiating. I have considered capacitance at the injectors, but they are under the valve covers. ANY help on this subject would be appreciated."

Anyone have specific experience with this vehicle? Ray, I didn't hear you say anything about bonding the body sheet metal sections, the frame, etc.

Joe Falcone, W8JOE, brings us back to antennas, another popular subject:

"I recall one article in which some fellow mentioned that he used a dipole adapter with two hamsticks to run mobile. I have a Safari (Astro) Van and could not get out with my Comet antennas on the back. I was thinking of hooking two Hamsticks to the top of the van, or even a Hamstick in a horizontal position. What do fellows who visit parking ramps and have vans do?"

Joe, there is no good answer. The best idea is to take your antennas on and off. I know that isn't really satisfactory. If the Comet antenna was mounted low and parallel to the van body, it didn't have a chance. If it was on the top, that is OK technically, but raises the clearance problems that you were talking about. The fellows using Hamstick dipoles, horizontal, were using them for mobile at rest, for RVing. I don't think anyone was using them while in motion. The compromises that I see are to use a very short antenna on the roof, or an antenna mounted on the side of the van, located high enough that any coils are clear of the roof.

Stu Dake, AC6GD, continues with another antenna question, "I am trying to decide on a screwdriver antenna to run on an RV. What do you think is the best one? Are you familiar with the High Sierra HS1500 -vs- DK3 design by N7LYY?"

The screwdriver antenna gets its name from the cordless screwdriver motor mounted inside to remotely tune the antenna loading coil. If it is to be on an RV, please note my warning above about having the coil clear of parallel metal surfaces. There are a number of antennas available that are based on Don Johnson, W6AAQ's DK3 screwdriver antenna. I don't have one (yet), but I have not heard from anyone unhappy with any of them. Antennas and kits are also available from Don at Box 595, Esparto, CA 95627. To get more DK3 smarts, Don's Mobileering book can be ordered from this magazine. See the *Worldradio* Books ad.

Let me hear from you on any HF mobile subject! Send e-mail to lcobb@compuserve.com, or write: Les Cobb, 4114 Horgan Way, Sacramento, CA 95821. More at http://home.pacbell.net/lcobb/.

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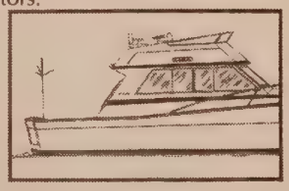

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Jerry Wellman, W7SAR

Are you a "Wizard?"

Too many years ago to count, I was living in Laramie, Wyoming and became the local Civil Air Patrol squadron's communications officer. My first assignment was to figure out a way to communicate with our squadron's pilot during air search missions. I don't recall the pilot's name but he flew a bright red Stinson. These were the days before low-cost VHF-FM and our options were limited.

My impression of radio was that of a small, elite group of technical wizards who accomplished amazing things behind locked doors. It was OK to approach a radio wizard with a question, but you'd better have done your homework because one question was all you got. If your question was accepted by the wizard, you'd be invited to learn. If not, you would be summarily dismissed, never to approach the wizard again.

Anyway, the Stinson pilot had recently upgraded the plane's avionics to a new navigational rig and had the old radio tucked away in his hangar. In the interest of public service, he donated the old radio, a Narco "Simplexer" to me so we could establish air-to-ground communications. He also gave me an old World War II vintage carbon microphone. Neither he nor I had much radio experience, but we figured that only an "aircraft" antenna would work for the radio, so he talked another pilot into donating an old antenna to the project.

My radio experience at the time was limited to Citizens Band rigs, but I was undaunted by this foray into aviation radio. The rig had the usual knobs: volume, squelch, channel select, and tuning. There was a transmit indicator lamp and it looked pretty straight forward. The Simplexer had a plug on the back that had the power, microphone, and speaker connections and soon the old Narco's tubes were glowing and sounds were coming from the speaker.

There were several unmarked connectors on the back including a Motorola jack and an RCA connector. From my limited radio experience, I figured the Motorola jack was the antenna connection (after all that's what my AM car radio had) and deduced that the RCA jack was for audio because every other RCA jack I'd seen had been used for audio. So we drilled a hole in the trunk of my car to attach the aircraft antenna (essentially a threaded, quarter-inch rod). We connected the coax and discovered we could hear the local Unicom aircraft traffic. Not wanting to run afoul of the FCC which we were sure monitored every frequency waiting to pounce on illegal operations, we decided not to test the transmitter yet.

The Narco radio was crystal controlled and I had to order a very expensive crystal for 123.1 MHz which was the search and rescue frequency. It took many weeks, but finally the crystal arrived, we plugged it into the radio, and we were ready for a test on our licensed frequency. I drove to the hangar and we warmed up the plane's radio. It was time for the big test. I carefully keyed the microphone and gave the CAP callsign. In the Stinson, the pilot heard the transmission and responded, saying it sounded good. We were excited and ready for action. We could hardly wait for the next search mission.

I spent a lot of time in the car listening to aircraft traffic, anticipating the opportunity to use the rig during our next search. As I recall, the mission came a month or two later and I volunteered to set up communications in the search area. Our communications included a three-channel CB radio (one channel was the CAP's 26 MHz channel), a Heathkit HW-18 HF-SSB radio, and the newly installed aircraft radio. All were tube radios which meant the car would have to be running while we operated and we didn't have a mobile HF antenna so I had to stretch a 100-foot dipole between trees.

Soon our squadron aircraft flew over and I could hear him calling our command post. I answered, but he didn't respond. The transmit light would come on, and we tried again, but no response. All of our other radios worked fine, and we received calls from the aircraft, but they couldn't hear us. After the search we retreated to the hangar to test the gear again. It worked fine in the hangar.

In desperation, I decided to approach a local electronics wizard. I drove to his shop, carefully knocked on the door, and was wide-eyed as the door opened and I could gaze on all those wires, tubes, and radios. I stammered out my dilemma and Lloyd (I recall only his first name) smiled and said he'd help me out. I was elated for the wizard had accepted my question and plea for help. In the next several hours, Lloyd showed me a watt meter and an SWR meter. He took the time to explain how they worked and drew pictures and diagrams on paper scraps as he taught me some basic trouble shooting.

He was not familiar with aviation radios, but assured me the principles were the same with every radio, demonstrating on his Amateur Radio gear and my CB gear. It appeared that there was no signal coming out of my Narco radio, for none of the meters moved when we keyed the rig. We could hear the signal on his monitor, but as he explained, without an indication on the meters, there was not enough signal to reach far. He then asked a fateful question: "Do you have an instruction manual?" Why hadn't I thought of that! I didn't have the manual, but soon found it among all the junk in the hangar.

With the manual and schematic, it didn't take Lloyd long to discover that the Narco radio required two antennas, one for transmit and one for receive. That RCA jack I thought was for audio was for the transmit antenna! Lloyd helped me install a second antenna and that Narco performed for many years on a number of search missions. I learned a great deal about radios that Saturday afternoon and Lloyd was happy to answer my questions for the year I lived in Laramie. That was a highlight of my year, befriending a radio "wizard."

The moral of the story is what I see happening in public service communications today. We're seeing some highly sophisticated trunked and data systems that require a "wizard" to install, troubleshoot and keep running. Users will focus on their

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specialty, for example, as peace officers and 9-1-1 dispatchers using data terminals. They won't be able to check for a loose coax or a blown fuse because the system will be complex enough to require a wizard. I'm not suggesting Amateur Radio operators tackle support for such a complex system, but I believe as systems become more complex, the need will increase for a system that is flexible and can integrate diverse resources during times of emergency. And that system is Amateur Radio.

Let's consider a scenario where an emergency requires linking fire and police services with a hospital in a mass casualty event. The fire and police operate an 800 MHz trunked system, the hospital has a VHF system, and the school buses used to transport the injured have radios on a variety of systems or no radios at all. It would be great for everyone to be on the same system. If you had enough spare police and fire personnel, you could have them travel with the buses or operate from the hospital, but you see the problem. They're needed at the scene and not as communicators.

You would also need to address the needs over several days and the ability to support an operation over a multi-jurisdictional area. The strength of Amateur Radio is the ability to link agencies and relay traffic. Operators can set up stations at the scene, at the hospitals, in the buses, and with other agencies not usually included in an overall system.

Let's say for the sake of argument that every agency in your county has a trunked system. You would also have to assume they were supplied by the same vendor so their systems would be compatible and let's presume that a common frequency were available for coordination. Can you imagine the confusion when fire, police, bus drivers, utility vehicles, hospitals, and many agencies attempt to share a common frequency? What's urgent to one will not be urgent to another. Hospital terminology will be confusing to bus drivers. You might have a single dispatch point attempting to control the chaos, but the traffic would be overwhelming.

My premise is that public services agencies do not have the resources to gear up for large-scale, multi-jurisdictional events that are temporary in nature. Their normal day-to-day needs require significant resources and large events simply overwhelm their systems. I recently listened to a vendor presentation where he explained how agencies can share a common trunked channel. And it sounds great during the sales pitch. It also works fine for coordination on a small scale. I submit that it doesn't work when the yogurt hits the fan.

We can compare the sales pitch to a highway system. The reason we have many roads between destinations is because one road cannot handle every car and different drivers have different needs. A freeway can handle large volumes during normal time but what happens during an accident or storm? You need alternate routes. Some cars are faster and more efficient and built for freeway use. Tractors work great in dirt but are slow on highways. A two-lane road between point A and point B is great until thousands need to travel all at once.

I look at Amateur Radio as the alternate routes during heavy use. Our need is to develop "wizards" that know how to look at a need and respond accordingly. Our people need to know how agencies work and how our systems work so we can link agencies together. Please take the time to show the new operators the ropes. Encourage antenna building parties, tune-up clinics, project building, and all the activities that allow others to learn what goes into making radio work. It's important that Amateur Radio is able to support itself by perpetuating technical expertise. We need people who know the basics.

It's time we develop Amateur Radio "wizards" like Lloyd — operators who are willing to take the time to teach others the basics and theory that apply to radio. Please take the time to let others know of your willingness to have them learn from you. As you hear someone new on the air, invite them over to build an antenna or volunteer to help them install their rig. Show them what an SWR meter is and how it works. Amateur Radio strength continues to be our technical ability with the basics. Let's ensure the legacy continues.

Until next month, best wishes from Salt Lake City!

—Jerry Wellman, W7SAR, can be reached at: P.O. Box 11445, Salt Lake City, UT 84147 or via e-mail: jw@desnews.com

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C.H. Stewart, KD5DL

Part I, BASIC PSK31

This is the first part in a series that will discuss interfacing computers with other Amateur Radio equipment.

One of the newest communications modes to hit the scene in the last few years is a computer-facilitated digital technique called PSK31. Invented by Peter Martinez, G3PLX, PSK31 is a method of sending and receiving precisely-timed digital signals in a way that maximizes readability at the receiving end. This is accomplished, in part, by Peter's use of Varicode on-off switching at the transmitter, and phase detection and "bit guessing" at the receiving end to check and print the received message.

PSK actually stands for Phase Shift Keying, and 31 is its keying rate, 31.25 baud.

PSK31 is free for the taking, so to speak. Peter has the whole operating system available for download at: http://aintel.bi.ehu.es/psk31.html. All it takes to get you started is a computer, a 16-bit sound card, any version of Windows, and an HF transceiver.

Having said that, I wanted to see if I could get PSK31 to work in my to-the-field portable station. Bill Jones, KD7S, had already whet my appetite with an article on modifying the NorCal NC20 QRP transceiver for digital operation, and I just happened to have a NC20 kit just waiting to be put together. Bill's modification was primarily for radio teletype (RTTY) operation, which operates somewhat differently from PSK.

In January, while perusing a few of my favorite web sites, I read an announcement on the New Jersey QRP Club's pages <http://www.njqrp.org> about an older model palm-top computer that the writer thought would be useful in QRP operations. It was called a Poqet PC Plus and was made by Fujitsu. The NJ page led me to Herry Tessler, W2GIA, who had about 4 of the computers for sale. I placed and immediate order at: dndcomp@earthlink.net.

The price price was right, $50, but the architecture was wrong. The little poqet PC ran on a NEC V30, an 80C88-microprocessor, so Windows (and Peter's version of PSK31) was out of the question. However, DOS, including the built-in MD-DOS v5.0, would work, and so would most DOS programs, including BASIC.

Interfacing the computer to the radio, however, was somewhat more difficult. Getting the Varicode out to the NC20 would be easy, but detecting it without a sound card would be a bit trickier.

On the transmit side, the NC20 has a built-in TiCK keyer IC, which is not strictly compatible with Varicode, but which can easily be programmed to straight key mode and made to work with Varicode. Alternatively, the p.c. trace near Q19's collector (marked "K" on the schematic) can take Varicode signals directly.

I opted to keep the TiCK chip "as is" and not chance voiding NorCal's warranty on the NC20 kit.

As I indicated earlier, keying the NC20 was the easy part. I remembered that an instructor at the vo-tech school had been using a computer-driven robotic arm in some of his electronics classes, and it seemed to me that I could try something along the same lines. I obtained a similar robotic arm and hooked it up to the Poqet's COM1 port, wrote a BASIC program subroutine, and got the arm operate a set of paddles plugged into the little NC20.

Devising a receive interface was somewhat more difficult. The more I thought about it, though, the more it seemed that God and nature already had already invented the perfect answer--the ear, except my version would have to be a very precise electronic ear.

The way a human ear works is that sound waves on the eardrum induce pressure waves in the liquid in the inner ear, and tiny hairs there pick up these vibrations and transmit the sensation to the brain.

My electronic ear would not have to be sensitive to different wavelengths; rather it would only have to sense the presence (or absence) of pressure waves corresponding to PSK's precise Varicode encoding.

PSK31's Varicode uses a series of ones and zeros to represent letters, numbers and characters and, like Morse code, they can be in any number of combinations of "dits and dahs" or ones and zeros. The lower case "e" in Varicode is 11, its upper case counterpart is 1110111, and so on (yes, there are upper and lower cases in PSK31). The shortest character in Varicode, a 1, represents a space, and the longest characters, like "Z" (1010101101) are 10 units long. However, the only time two zeros are sent in sequence is to indicate the gap between characters (e.g. the end of one character and the beginning of the next).

Therefore, my electronic ear would "listen" for these two "nothing" signals, and when hearing (not hearing?) them, the measuring circuit would reset all registers to zero. The very next signal, which has to start with a "one," would trigger all sensors in the train to "read" the highs and lows in the canal and send the sequence pattern to the computer to be decoded. Simultaneously it would look for the next pair of adjacent zeros so it would know where the current character string ended and the next one began.

The hard part was figuring out how to sense these Varicode signals. I knew I had to use glass or rigid metal tubing for the canal because plastic tubing would allow too much change in pressure density within the tube, and that would affect the speed of the waves and the sensor spacing. Besides, soft plastic

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would probably attenuate any sound as it traveled down the canal.

Glass and metal presented their own problems. For one thing, their rigidity and density made them better conductors of sound than the air within. Try as hard as I could, I couldn't overcome this problem of differing velocity factors, nor of the device's overall sensitivity to vibration and microphonics.

It finally hit me that I could get away with glass or metal if I shifted the emphasis from sensing sound.

Sensing radioactivity was one of the most intriguing solutions, and seemed to be the best I could come up with!

I reasoned that I was dealing with pressure waves, which are more dense at their fronts than in their troughs. If I used a radioactive gas, for example, then the dense crests would be easily detectable because they would emit more radiation per unit density than the less dense spaces between them. Sure enough, it worked as expected.

I fabricated the glass canal from an old neon tube that had a sound transducer at one end and was sealed at the other. At first I tried using an ultrasonic transducer I had borrowed from the burglar alarm at work, but it just didn't generate enough pressure to do the job. I found I needed a stronger "pumping" action, to get the required levels of gas density. Next I tried the woofer from my daughter's stereo, but it nearly broke the canal and the rest of the setup. Finally I found that a little "ear bud" earphone, driven by an LM386 audio IC, was just about right, not only for generating pressure waves, but because it fit the end of the neon tube perfectly. To reduce reflections from the far end of the canal I stuffed some acoustic insulation (Radio Shack 42-1082) just beyond the last sensor.

The sensors obviously had to be geiger counter tubes, which are nothing more than small coaxial-type tubes with a self-quenching ionizing gas between the inner and outer conductors. A potential of about 300 to 500 volts is placed across the two conductors, and when a radioactive particle ionizes the gas, a small spark jumps, and can be detected as the familiar "click" in a set of earphones.

I built a series of geiger tubes from copper water pipe, teflon glue and AWG #33 wire. To insure radiation could get into the sensors relatively unimpeded, I milled a small section of one side on each one down to a thickness of just under a few Angstroms. It takes ten sensors to register the Varicode patterns.

A neighbor once told me he had radon gas leaking into his basement, so that's where I got the radioactive gas to fill the canal tube. For high voltage sources to charge the geiger tubes I found that the flash circuits from disposable cameras were ideal. With fresh AA batteries they can provide upwards of 330 volts DC, and they were free for the asking at my local one-hour photo lab.

But the high voltage presented another problem — I had to find a way to keep it out of the Poqet's CMOS circuitry. It just so happened that I had a relay board I recently salvaged from the salvage yard, and it appeared it could provide the isolation I was looking for. In fact, it provided another benefit as well; whenever I tune the NC20 exactly to a PSK signal, the relay "chatter" serves as an audible tuning aid!

While everything worked perfectly as planned, I had "sensitivity" problems that I later discovered, was the radon gas slowly losing its potency. I had neglected to take into consideration its 3.85-day half-life.

However, I lucked out while rummaging around a nearby Atomic Energy Commission dump site — I found a few dozen bricks of radioactive carbon-14. Yes, this is the same stuff they use to date dinosaurs and other fossils with.

C-14 can be burned to produce radioactive carbon dioxide and radioactive carbon monoxide, both of which are gasses. (Be careful; carbon monoxide, is poisonous.) Either gas works fine, although radioactive carbon dioxide is less radioactive per unit volume than its carbon monoxide counterpart.

Now that I've explained the general theory of PSK31 operation and how I homebrewed my own interface, I've run out of space. I'll save the actual hookup and adjustment, and the BASIC listing that makes it all work, for next time. Meanwhile, consider Amateur Radio a "contact" sport and stay radio active.

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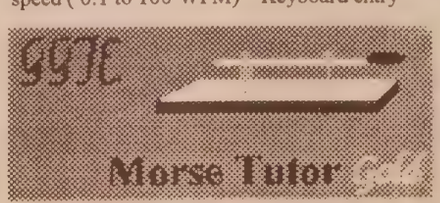

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...serving children

On 08 December 1999 a wonderful happening took place at Kennedy Airport in New York. A philanthropic organization called Community Mayors hosted a Holiday party for Special Education students in the New York City school system.

Community Mayors is comprised of people from many walks of life whose mission is to do good works for handicapped children. Their motto is, "No Man Is So Tall As When He Stoops To Help A Handicapped Child." In conjunction with volunteers from the New York City Police Department, New York City Firefighters, CIA, FBI, New York City Sanitation Department, Port Authority Police, Department of Immigration, and many other groups, a Herculean effort was put forth to bring a little happiness to the lives of those less fortunate.

I've been impressed for some time by the charitable works performed by Community Mayors. It wasn't hard for me to see that bringing in a team of Amateur Radio operators to provide communications for this large event could only be an asset to ensuring a successful experience.

First I went to the planning committee of Community Mayors Holiday Party and explained the benefits of having a well trained team of Amateur Radio operators to shadow their key people in the huge Continental Airlines hangar, After many years of being on 'combat duty' with trying to promote the advantages of Amateur Radio to the general public, I have learned the lesson of always going in being prepared, and always, always having a glitzy presentation. I came to the meeting with handouts of press releases and endorsements, so everyone could take something home to read in their leisure. I, of course, gave a plug for the ARES group I planned to bring in; but I also relayed stories of children in my class speaking to people around the world, astronaut contacts and about the fabulous work that radio amateurs do in times of disaster. They were skeptical at first, but they did acknowledge that there was always an inability to communicate well at such a large and noisy event. They agreed to consider the possibility of bringing my people in.

Next I went to my friend Charlie Hargrove, N2NOV, who heads up the ARES group on Staten Island. Charlie has always been there to help bring in well trained amateurs for many of the special events that I've been involved with through the years. He and his team are always ready to help. It was two years ago that we first conceived the idea of helping out at this very well publicized event.

I invited Charlie to come with me to a planning committee meeting, and between the two of us we did a good job convincing them to give us a try. That year, Charlie brought his team in and assigned shadows to the key people. He learned where the best location was for setting up the base operation and placed us all in strategic locations throughout the hangar.

If the Community Mayors were impressed and grateful to all of us; so were we with them. In all my years of doing events for children, I was never involved with anything of this magnitude. I was assigned the job of shadowing the master of ceremonies, Jerry Parker, who just happens to be my husband. This was no easy task since the man is a bundle of boundless energy who is everywhere at once.

Thousands of special education children, including several hundred who were wheelchair bound, were served lunch, given toys and other gifts, and were greeted by the Macy's Santa Claus and Mayor Rudy Guilliani of New York City. It was an incredible experience for all of us.

At the follow up meeting that year, it was overwhelmingly decided to include Amateur Radio as an integral part of their operations. So Charlie had no trouble assembling another terrific group of amateurs for the 1999 party.

This time, the head of the Port Authority Police called me personally at home to request the same shadow he had the year before. He said he knew of the good works of Amateur Radio operators before, but he was impressed all over again at what we added to the event in easibility of communications.

I especially looked forward to this year's event because the cheerleaders from my school, Intermediate School 72 in Staten Island, New York, were one of the groups providing entertainment for the children. Different schools from around the city sent marching bands and cheerleaders to add to the festivities.

Once again, it was a heartwarming, feel good experience to be there and to be part of such a special gathering. More than 5,000 youngsters attended the party with close to 2,000 of them being in wheelchairs. The smiles on all of their faces as Macy's parade characters like Spiderman and Snoopy walked amongst them was a gladdening experience.

Then the big moment came as Santa and the Mayor (who were flown in by helicopter) arrived "from the North Pole" and were taxied in right inside the hangar in a 747 to get off the plane and be driven through the isles of children's tables on board a small train borrowed from a local amusement park in Coney Island. There is no doubt that for many of these children this would be the highlight of their holiday season.

Well, as you might guess, at the follow up meeting in January, tribute was paid to all the Amateur Radio operators who participated. It was publically acknowledged that they can't imagine ever running an event of that magnitude again without the help of Amateur Radio operators.

The wonderful team under Charlie's leadership was: Elmar Vaher, K2EL; John Kiernan, KE2UN; Bill Butler, N2BGR; Guy Richman KC2AYG; Ray Valvik, N2ZWT; Sergio Rodriguez, WB2SEB; Carl Everts, N2VQP; Hendrix Albert, KC2CUR; Karen Hargrove, N2ZYF; Adam Fine, KG2QZ; Mike Moran, KC2CYE; Frank Katalenas, N2UMC; Mark Phillips, G7LTT; Phyllis Napolitano, KC2DKD; Robert Robinson, KB2PSM; Ron Godschalk, N2GVJ; Carole Perry, WB2MGP; Charles Hargrove, N2NOV.

Isn't it great to be in a hobby and service that can bring people together and promote such good will?!

Once again, I have been asked to host the Youth Forum at the Dayton Hamvention. If you are a young amateur and you are going to the Hamvention, I'd like to invite you to be a speaker at the forum. We usually have a good crowd at the forum, and they would love to hear how you became interested in Amateur Radio and how being a Ham has changed your life. Send a letter or an e-mail to me. I want to see your story!

— Carole Perry, WB2MGP, can be contacted at: 28 Keune Ct., Staten Island, NY 10304; or via e-mail: wb2mgp@ix.netcom.com.

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ARIZONA

Arizona Repeater Association. P.O. Box 35758, Phoenix, AZ 85069-5758. Operates 20 VHF & UHF rptrs. in AZ. Meets 4th Thurs./monthly, 7:30 p.m., APS Shure Building, 2124 W. Cheryl, Phoenix, AZ. Info:www.goodnet.com/indirect/www/ara 12/00

Cochise Amateur Radio Assn., (CARA). Meets 1st Mon./monthly, 7:30 p.m. at club facility on Moson Rd., Sierra Vista, AZ. K7RDG/R 146.76(-) rptr. PL162.2. 5/00

Old Pueblo Radio Club, (OPRC). P.O. Box 42601, Tucson, AZ 85733. Meets 2nd Wed./monthly, 7:15 p.m., Tucson Med. Cntr., Grant & Beverly St. in the AZ Rm. of the Volunteer's Bldg. (1st bldg. on the left going north off Grant). 2/01

CALIFORNIA

Amador County Amateur Radio Club. P.O. Box 1094, Pine Grove, CA 95665. Meets 1st Thurs./monthly, 7:30 p.m., Jackson Sr. Cntr., 229 New York Ranch Rd., Jackson, CA. Info: 146.835(-). 5/00

Amateur Radio Club of Anderson, (ARCA). Meets 2nd Thurs./monthly, 7:30 p.m., VFW #9650, 3210 W. Center St., Anderson, CA. Net every Tues., 7:30 p.m. on 146.640 freq. Website: www.snowcrest.net/bgorski/index.html 2/01

Beach Cities Wireless Society. P.O. Box 4016, San Clemente, CA 92674. Meets 2nd Thurs./monthly, 7:30 p.m., Ole Hansen Beach Club, 105 W. Avenida Pico, San Clemente. Rptr. 146.025(+) PL 110.9. 9/00

Clairemont Rpt. Assoc. Meets bi-monthly brkfst mtg, 3rd Sat./odd numbered months, Westminster, CA. Info: send SASE to P.O. Box 7675 Huntington Bch, CA 92615 or W6UTE in Call Bk. Net ea. Tue., 7 p.m. 145.220(-)PL 103.5 in So. CA 3/01

Coachella Valley ARC. Box 11092, Palm Desert, CA 92255-1092. Meets 2nd Wed./monthly, 6:30 p.m., Portola Com. Cntr., 45480 Portola, Palm Desert. Info: Bill Dews, (760) 346-8611. Net Thurs. 7 p.m. 146.025(+) PL 107.2. 5/00

Contra Costa Communications Club, Inc., WD6EZC/R. P.O. Box 20661, El Sobrante, CA 94820-0661. Meets 2nd Sun./monthly (except May & Dec.), 08:00, Denny's, El Cerrito, CA 145.110 PL 82.5 Info: S. Clark, KB6SEI, (510) 724-0158. 2/01

Downey Amateur Radio Club Inc., W6TOI. Meets 1st Thurs./monthly, 7:30 p.m., So. Middle Sch. cafetorium, 12500 S. Birchdale, Downey, CA. VHF net W6GNS rptr. 146.175(+) Thurs.,7:30 p.m. http:/www.downeyarc.org. Info L. Vaughn, kd6nzw at kd6nzw@downeyarc.org 5/00

Fresno Amateur Radio Club. Meets 2nd Fri./monthly, 7:30 p.m., Ernie Pyle School, 4140 N. Augusta, Fresno, CA. 146.94(-) 223.94(-). 11/00

Golden Empire Amateur Radio Society, (VEC). P.O. Box 508, Chico, CA 95927. Club call W6RHC, rptr. 146.85(-). Meets: 3rd Fri./monthly, 7:30 p.m. at 345 Cherry St. (Library Rm.), Chico. 5/01

Golden Triangle Amateur Radio Club. P.O. Box 1335, Wildomar, CA 92595. Meets 4th Mon./monthly, 7 p.m., Beverly Health Care, 24100 Monroe Ave., Murrieta, CA 92562. Rptr: W6GTR 146.805(-) PL 100. Info: H. Wijma, AC6VN, (909) 693-2383. E-mail: ac6vn@cs.com 8/00

Livermore Amateur Radio Klub, (LARK). Meets 3rd Sat./monthly, 9:30 a.m., City Council Chamber, 3575 Pacific Ave., Livermore, CA. Net Mon. 1900 on 147.12(+). Info: LARK Sec., P.O. Box 3190, Livermore, CA 94551-3190. (925) 373-1386. 2/01

Los Banos Amateur Radio Club. Meets 2nd Sat./monthly, 7 p.m., Scout bldg. at Pacheco Pk., 7th St. & Pacheco Blvd. Info: M. Germino, AD6AA, (209) 826-0903, e-mail: AD6AA@arrl.net. Net 147.060(+) PL 107.2 every Thur. 7 p.m. Rpt. KB6NMP 147.06(+) PL 107.2 & 444.00(+) PL 241.8. http://www.qsl.net/lbarc/ 6/00

Motorcycling Amateur Radio Club. Meets 2nd Sat./monthly, 8 a.m., Lake View Cafe, 2099 E. Orangethorpe, Placentia, CA, 91 Fwy/Lakeview. Info: R. Davis, KD6FHN, (949) 551-1036 or (949) 551-2010. 5/00

Mount Diablo Amateur Radio Club. P.O. Box 23222, Pleasant Hill, CA 94523. Meets 3rd Fri./monthly, 7:30 p.m., Our Savior's Lutheran Ch., 1035 Carol Ln, Lafayette, CA. Net Thurs. 7:30 p.m. on 147.06(+) PL 100Hz. Info: (510) 932-6125. 8/00

Nevada County ARC. Meets 2nd Mon./monthly, 7 p.m., Salvation Army Bldg., 10725 Alta St., Grass Valley, CA. Net Tues. 7 p.m. 147.015. Info L. Johnson, KE6HWE, lindasue@mail.telis.org.(530)273-2008. 9/00

North Hills Radio Club. Meets 3rd Tue./monthly, 7:30 p.m., Carmichael Elks Lodge, 5631 Cypress, Carmichael, CA. Nets 8 p.m. Tue., (except 3rd Tue.) & Thur., 145.190(-) (PL 162.2 Hz) & 224.400(-) MHz. Info: B. Griffin, N6WWY, (916) 729-7117. E-mail: nhrc@ K6IS.org or http://www.k6is.org 4/01

Orange County Amateur Radio Club. Meets 3rd Fri./monthly, 7:30 p.m., Orange County Red Cross, 601 N. Golden Circle, Santa Ana, CA. Talk-in 146.550 (S). Contact Parry Hoffman, K6LDC, (714) 636-4345 WWW.W6ZE.ORG 2/01

Poinsettia ARC. Meets 1st Thurs./monthly, 7:30 p.m., First Christian Ch., Telegraph Rd. & Teloma Dr., Ventura, CA. Info: J. Casper, N6PIQ, (805) 649-1445. 4/00

Redwood Empire DX Assoc., W6KB. P.O. Box 455, Santa Rosa, CA 95402. (707) 544-4944. DX & contest club. Dinner mtg. 3rd Wed./monthly, 6:30 p.m., Carrows Rest., Hwy 101 & E. Washington, Petaluma. www.redxa.com 12/00

River City A.R.C.S. Meets 1st Tues./monthly, 7 p.m., SMUD Bldg., Don Julio at Elkhorn, Sacramento, CA. License classes offered. Info: (916) 492-6115.10/00

Sacramento "Old Timers" Amateur Radio Society and Sacramento Valley Chapter #169 QCWA (Quarter Century Wireless Assn.). Meets 2nd Wed./monthly, 8 a.m., Lyon's Rest., 1000 Howe Ave., Sacto. CA. Info: Paul Wolf, W6RLP (916)489-8112. 12/00

Shasta Cascade Amateur Radio Society, (SCARS). P.O. Box 493549, Redding, CA 96003. Meets: 3rd Wed./monthly (Sep-May), 7:30 p.m. at the C.D.F. Conf. Rm. Grape St., near Parkview Ave., Redding, CA. Net 146.64, Wed., 8 p.m. 3/01

Sierra Foothills ARC. P.O. Box 1005, Newcastle, CA 95658. Meets 2nd Fri./monthly, 7:30 p.m., Auburn Library (Beecher Rm.), 350 Nevada St. Thurs. nets 7:30 p.m. 145.430(-) PL 94.8, Sun. net 7:30 p.m. 28.415. 6/00

Sonoma County Radio Amateurs, Inc. W6LFJ. P.O. Box 116, Santa Rosa, CA 95402, (707) 579-9608. Meets 1st Wed./monthly, 7:30 p.m., Agilent Tech., 1400 Fountain Grove Pkwy, Santa Rosa. Net ea. Tues., 7 p.m. W6SON. Rptr. 146.73(-) PL 88.5. www.eds1.net/scra 12/00

South Bay ARC. P.O. Box 536, Torrance, CA 90508. Meets 3rd Thurs./monthly, 7:30 p.m., Torrance Memorial Hosp., 3330 Lomita Blvd., Torrance, CA. Talk-in on WB6MYD rpt. 244.38(-). Info: (310) 328-0817. 8/00

Southern California Six Meter Club. P.O. Box 10441, Fullerton, CA 92635. USB Net Tue., 8:00p.m., 50.150. FM Rpt. Net Thurs., 7:30 p.m., 52.86/52.36 tx. FM Smplx, call freq. 50.300. Net Sun., 10 a.m. 50.40. 12/00

Stanislaus Amateur Radio Assoc., Inc. (SARA). P.O. Box 4601, Modesto, CA 95352. Meets 2nd Tues./monthly, 7:30 p.m., NW Modesto Police Station, 2005 Evergreen, Ste. 600. Net 1.2+4 Tues. 7:30 p.m. 145.390(-) PL 136.5 2/01

Tehachapi-Southern Sierra ARS. Meets 2nd Thurs./monthly, 7 p.m., except July, 125 East F St., Tehachapi, CA (Veteran's Hall). Info: KD6KMN, (661) 822-5995. www.ssars. net, 147.06(+), 224.42(-) PL 156.7. Pkt 145. 090(S) connect to W6PVG-7. ARES nets 7 p.m. 147.51(S) Mon. 1/01

Trinity County ARC. P.O. Box 2283, Weaverville, CA 96093. Meets 2nd Wed./monthly, County Sch. Adm. Bldg., Weaverville, 7:30 p.m. Rptrs: WA6BXN 146.73(-) PL 85.4, W6HOR 146.925(-) PL 85.4. 2/01

United Radio Amateur Club, K6AA. L.A. Maritime Museum, Berth 84, Foot of 6th, San Pedro, CA 90731. Meets 3rd Fri./monthly (except Dec.), 7:00 p.m. Monitors 145.52 Simplex 10 a.m.-5 p.m. 8/00

Vaca Valley Radio Club. Meets 2nd Wed./monthly, 7:30 p.m. (Board mtg., 7 p.m.) Vaca Fire Dist. Stn., Vine St., Vacaville, CA. Rptr. WD6BUS 145.47(-) PL 127.3. Gerald Grossardt, (707) 447-0869 5/00

Victor Valley Amateur Radio Club. P.O. Box 869, Victorville, CA 92392. Meets 2nd Tue./monthly, 7 p.m., The Lewis Cntr, 20702 Thinderbird Rd., Apple Valley, CA. Talk-in 146.94(-), PL 91.5. Net Sun. 7 p.m. 146.94(-) 3/01

West Coast Amateur Radio Club, (WCARC). P.O. Box 2617, Costa Mesa, CA 92628. Meets 3rd Thurs./monthly, 7 p.m., Fountain Valley Sch. Dist. Office, 17210 Oak St., Fountain Valley, CA. Info: Jane, KD6ODV, (714) 531-6707 2/01

Westside Amateur Radio Club. P.O. Box 11092, Marina del Rey, CA 90295. Meets 4th Tues./monthly, 7:30 p.m., W. Dist. R. C. Bldg., 11355 Ohio Ave., W. L.A., CA (VA Cntr. grounds). Net Tues., 8 p.m. 146.67(-) except mtg. night. Website: http://www.qsl.net/wa6rc Voice Mail: (310) 478-7555 9/00

Willits Amateur Radio Society, (WARS). P.O. Box 73, Willits, CA 95490. Meets 4th Mon./monthly, 7 p.m., Brooktrails Fire Dept. 2 NW Willits http://www.saber.net/wars. Talk-in: 145.13(-), PL 103.5. 9/00

Yolo Amateur Radio Society. Meets 1st Tues./monthly, 7:30 p.m., Davis Explorit! Science Cntr, 3141 5th St., Davis, CA. Contact Dave Nishikawa, KC6YFG, (916) 756-6375/Talk-in 144.430. 3/01

COLORADO

Boulder Amateur Radio Club (BARC). Meets 3rd Tues./monthly, 7:30 p.m., NIST rm 1107, 325 So. Broadway, Boulder, CO. Talk-in:146.70(-). Info: (303) 380-6540, e-mail: BARC5Ø@arrl.net or www.thisistrue.com/barc.html 8/00

CONNECTICUT

Tri-City Amateur Radio Club. P.O. Box 686, Groton, CT 06340-0686. Meets 2nd Tue./monthly, 7 p.m., St. Lukes Lutheran Church of Gales Ferry on Rt. 12. Info: B. Dargel, KA1BB, (860) 739-8016. 8/00

Western CT. DX Club. Meets 1st Tues/monthly, 8 p.m., Brookfield Com. Cntr. (on Pocono Rd. across from Brookfield P.O.) Info: contact Victor at: victoras@EROLS.com 8/00

FLORIDA

Gulf Coast ARC. P.O. Box 595, New Port Richey, FL 34656. Meets 4th Mon./monthly, 7:30 p.m., Marchman Tech. Ed. Cntr., 7825 Campus Dr., Bldg. C, Rm C122, New Port Richey. WA4GDN rptrs. 146.67(-) & 145.33(-), serving all of Pasco County. 11/00

Lake Monroe Amateur Radio Society. P.O. Box 151353, Altamonte Springs, FL 32715. Meets 1st Thurs./monthly, 7:30 p.m., Casselberry Sr. Cntr., Lake Triplett Dr., Casselberry, FL. Info: K. Lambert, KB4DCR, (407) 359-7767 10/00

Port St. Lucie ARA. Meets 2nd Fri./monthly, 7:30 p.m., St. Andrews Church, Prima Vista Blvd., Port St. Lucie, FL. Contact: Roy Cox, KT4PA, (561) 340-4319. www.qsl.net/pslara or 146.955-. 11/00

South Brevard Amateur Radio Club. P.O. Box 2205, Melbourne, FL 32902. Meets 1st Tue./monthly, 7 p.m., Public Library, 540 Fee Ave., Melbourne, FL. 12/00

GEORGIA

Cherokee Capital ARS. Meets 2nd Tue.monthly, 7 p.m., New Echota Methodist Church, 488 Red Bud Rd., Calhoun, GA. 146.805(+). Info: Felton Floyd, AF4DN, (706) 629-0369. 1/01

Dalton Amateur Radio Club, Inc., (DARC). P.O. Box 143, Dalton, GA 30722-0143. Meets 4th Mon./monthly, 7:30 p.m., Magistrate Court Bldg., corner of Waugh St. & Thornton Ave., Dalton, GA. Info: Harold Jones, N4BD, 706/673-2291. 4/00

Gwinnett Amateur Radio Society, (GARS). P.O. Box 88, Lilburn, GA 30048. Meets 3rd Thurs./monthly, 7:30 p.m., Gwinnett Central Baptist Church on Gwinnett Dr., Lawrenceville, GA. 147.075+ PL 82.5. Contact: Mike Swiderski, K4HBI, (770) 449-0369. 8/00

HAWAII

Big Island Amateur Radio Club. P.O. Box 1938, Hilo, HI 96721. Meets 2nd Sat./monthly, 2 p.m., Keaau Community Ctr., behind Fire Station on Old Volcano Rd., Keaau. Talk-in on 146.88(-). Lunch, 11 a.m. Fridays, Hilo Hawaiian Hotel - Queen's Court Restaurant. 9/00

Emergency Amateur Radio Club, (EARC). P.O. Box 30315, Honolulu, HI 96820-0315. Meets 4th Thurs./monthly, 7 p.m., Lincoln Elementary. School, 615 Auwaiolimu, Honolulu. Nets: nightly 7:30 p.m., 146.88 & 146.80. Rptrs: 146.76(-), 146.80(-), 146.88,146.98(-), 146.94(-). Info: (808) 256-6001, WH6CZB. 12/00

Koolau Amateur Radio Club, (KARC). 45-145 Mikihilina St., Kaneohe, HI 96744. Meets 2nd Sat./monthly, 9:30 a.m., Hoomaluhia Botanical Garden., Kaneohe, HI. Info: (808) 235-3042. http://www.chem.hawaii.edu/karc/ 8/00

ILLINOIS

Chicago FM Club Inc., (CFMC). P.O. Box 1532, Evanston, IL 60204. 146.76(-) PL 107.2/224.10/224.18/443.75 PL 114.8. Ham help line: (773) 262-6773. Info net Tues., 9 p.m. on 146.76(-). Meets 3rd Wed./monthly, 8 p.m. 8/01

Dupage Amateur Radio Club. (DARC). P.O. Box 71, Clarendon Hills, IL 60514. Meets 4th Mon./monthly, 7:30 p.m., Fire Station #3, between 59th & 63rd, Westmont, IL. Net Sun., 9 p.m. on 145.250. W9DUP rpts. 145.25(-) 107.2PL, 442.550(+) PL 114.8, 224.68(-). Info: (630) 985-9256 10/00

Fox River Radio League. P.O. Box 673, Batavia, IL 60510-0673. Meets 2nd Tue./monthly, 7:30 p.m., Old Bank Bldg., 900 No. Lake St., lower level, Northgate Shopping Ctr. & Rt. 31, Aurora, IL. 8/00

Peoria Area Amateur Radio Club, (PAARC). P.O. Box 3508, Peoria, IL 61612-3508. Meets 2nd Fri./monthly, Red Cross Chapter House, 311 W. John Gwynn Jr. Ave., Peoria, IL. Voice mail: (309) 692-3378. Rptrs: 147.075(+) & 146.85(-). 8/00

Schaumburg ARC. P.O. Box 68251, Schaumburg, IL. Meets 3rd Thurs./monthly, 7 p.m., Rec. Center, Bode and Springinsguth Roads. (630) 612-9446. http;//members.aol.com/sarcradio 10/00

The Starved Rock Radio Club, W9MKS. P.O. Box 198, Tabor St., Leonore, IL 61332. Meets 1st Mon./monthly, 7:30 p.m. Rptr. net 7 p.m. Wed./wkly., 147.12(+). 4/00

Wheaton Community Radio Amateurs, (WCRA). P.O. Box QSL, Wheaton, IL 60189. Meets 7:30 p.m., 1st Fri./monthly, College of DuPage, Wheaton, IL. Rptrs: 145.39(-) (107.2), 224.14(-), 444.475(+) (114.8). Info: Ron Hensel, K9ZE, (630) 365-0213, k9zze@aol.com 8/00

LOUISIANA

Baton Rouge ARC. Meets last Tue./monthly, 7 p.m., Catholic High School, 855 Hearthstone Dr., Baton Rouge, LA. Net: 146.79MHz, 8:30 p.m. Sun. www.brac.org. E-mail: W5GIX@aol.com. 11/00

MAINE

Androscoggin Amateur Radio Club. Meets 1st Wed./monthly, 7 p.m., Auburn Police Station, 1 Minot Ave., Auburn, ME. Info: (207) 782-8699. 6/00

MARYLAND

Maryland Mobileers Amateur Radio Club (MMARC). P.O. Box 935, Severn, MD 21144. Meets 1st Fri./monthly, 7:30 p.m., Baldwin Hall, Generals HWY, Millersville. Info net each Mon. 8:30 p.m. on 146.805(-), tone 107.2 Hz 4/00

MASSACHUSETTS

Genesis Amateur Radio Society. P.O. Box 1234 Plymouth, MA 02362. Meets last Mon./monthly, 7:30 p.m. at Plymouth Airport, So. Meadow Rd. Tues. net: 146.685, W1LM, 8 p.m. 7/00

Quannapowitt Radio Assoc., Inc. 6 Savin St., Burlington, MA 01803. Meets 3rd Thur./monthly, 7:00 p.m. at Wakefield Public Library, 345 Main St., Wakefield, MA, Sept. to May. Info: Jim Chamberlain, N1AKG, (781) 944-5098. 5/00

MICHIGAN

Adrian Amateur Radio Club, W8TQE. Box 26, Adrian, MI 49221. Meets 1st Fri./monthly, 7:30 p.m., Civil Air Patrol Bldg., Lenawee Co. Airport, Cadmus Rd., Adrian. ARES net Sun., 9 p.m. 145.37(-). Info: Neil Griffith, KC8DAR, (517) 263-5774. 6/00

Genesee County Radio Club, Inc. Meets 3rd Tues./monthly, 7:30 p.m., Genesee Area Skill Center, Torrey Rd., Flint, MI. (810) 733-2082. 3/01

Hiawatha Amateur Radio Assoc. of Marquette Co. P.O. Box 1183, Marquette, MI 49855. Meets 1st Thurs./monthly, 7:30 p.m., 108 Stratofort, K.I. Sawyer AFB, MI. For info contact: Richard Schwenke, N8GBA, (906) 249-3837. 10/00

MISSISSIPPI

Jackson Amateur Radio Club, Inc. Meets 3rd Thurs./monthly, 7 p.m., Am. Red Cross Bldg., Riverside Dr., Jackson, MS 39202. 11/00

West Jackson County ARC, Inc. Meets 3rd Tues./monthly, 7 p.m., Ocean Springs Crt. Rm., Ocean Springs, MS 1/01

MISSOURI

Macon County ARC. P.O. Box 13, Macon, MO 63552. Meets last Wed./monthly, 7 p.m., Macon R-I High Sch., rm.167. Net every Thurs., 8:30 p.m. 146.805. E-mail: nøpr@arrl.net 1/01

NEVADA

Frontier Amateur Radio Society, (FARS). Meets: 1st Sat./monthly, bkfst. mtg. 10 a.m., Chicago Hot Dog Drive In, 1078 No. Rancho Dr., Las Vegas, NV. after AES swap meet. Club info: Jim Frye, NW7O, (702) 456-5396 or Bill Scarborough, WA6ASI, (702) 269-9551. 8/00

Sierra Intermountain Emergency Radio Assoc., (SIERA). Meets 2nd Tues./monthly, 7:30 p.m., Minden Med. Cntr, Hwy 395 & Ironwood Dr., Minden, NV. Info: George Uebele, WW7E, (775) 265-4278, ww7e@arrl.net, Rpt. 147.330 MHz.. 1/01

Wide Area Data Group, Inc. P.O. Box 3132, Sparks, NV 89432. Meets 1st Sat./monthly, 8:30 a.m., JM Restaurant & Grille, 1885 S. Virginia, Reno. Info: (702) 356-8200. Call on 147.30(+) MHz. 5/00

NEW HAMSHIRE

Port City Amateur Radio Club, (PCARC), W1WQM. P.O. Box 1587, Portsmouth, NH 03802. Meets 1st Wed./monthly (Sept.-June), The Edgewood Ctr., 928 So. St., Portsmouth. Rptr. 146.805(-) PL 127.3, 110.9, 88.5. 11/00

NEW JERSEY

Bergen Amateur Radio Association, (BARA). P.O. Box 304, Hackensack, NJ 07601. Meets 1st Sun./monthly, New Milford Elks Lodge, Patrolman Ray Woods Dr., New Milford, NJ 07646. Nets: 28.350 Mon. 9 p.m., 146.79(-) 9 p.m. Wed. 6/00

The Garden State Amateur Radio Assoc., (GSARA). Meets 1st & 3rd Wed./monthly, 8 p.m., MARS Bldg., Fort Monmouth, NJ. Info: Bob Buus, W2OD, (732) 946-8615. 12/00

South Jersey Radio Assoc., (SJRA), K2AA. Meets Jan.-Oct., 4th Wed./monthly, 7:30 p.m. (Nov.-Dec. 3rd Wed), Bloomfield Fire Hall in Pennsauken, NJ. Talk-in: 145.29(-) rptr. 8/00

NEW YORK

Amateur Radio Association of the Tonawandas, (ARATS). P.O. Box 430, No. Tonawanda, NY 14120. Meets 3rd Tues./monthly (except July & Aug.), 7:30 p.m., Sweeney Hose Co., 499 Zimmerman St., No. Tonawanda, NY. Talk-in: 146.955(-) rptr. W2SEX. 2/01

Genesee Radio Amateurs, (GRAM). P.O. Box 572, Batavia, NY 14021-0572. Meets 3rd Thurs./monthly, 7:30 p.m. (except Jul, Aug, Dec), Am. Red Cross, 220 East Main St., Batavia, NY. URL: http://hamgate1.sunyerie.edu/~gram 4/00

Hall of Science Amateur Radio Club. P.O. Box 150131, Kew Gardens, NY 11415. Meets 2nd Tue./monthly, Hall of Science Bldg., 47-01 111 St., Flushing Meadow Park, 7:30 p.m. Info: Voice mail (718) 760-2022. 3/01

PROS, Pioneer Radio Operators Society. Meets 1st Wed./monthly, 7 p.m., Sardinia Town Hall, Savage Rd., Sardinia, NY. Net 9:15 a.m. Thurs. 3853 MHz. 5/00

The Radio Club of J.H.S. 22, N.Y.C., Inc. WB2JKJ. P.O. Box 1052, New York, NY 10002. 24-hr. hotline: (516) 674-4072. Fax: (516) 674-9600. E-mail: crew@wb2jkj.org. Non-profit org. using Ham Radio to enhance the education of youngsters, nationwide. Join us—"Class-room Net," 7.238 MHz, 7 a.m. E.S.T. PSE QSL! 10/00

South Towns Amateur Radio Soc. (STARS). Meets 1st Thurs./monthly, 7:30 p.m., Hamburg Youth Cntr, Prospect Ave.Hamburg, NY (exc. Jul, Aug @ NIKI Base). Info: N2TEZ, 180 University Ave., Depew, NY 14043. Web: www.cmp-express.com/stars. Rpt: WB2ELW 147.090(+) PL107.2 11/00

Suffolk County Radio Club, (SCRC). Meets 3rd Tues./monthly, 8 p.m., Bohemia Rec. Ctr., Ruzicka Way, Bohemia, NY. Talk-in: 145.21(-) rpt. Info: W.S. Black, KB2YAP, (516) 289-5587. 5/00

Westchester Emergency Comm. Assoc., (WECA). Meets 2nd Mon./monthly, 7:30 p.m., Westchester County Ctr., White Plains, NY. Contact WECA INFO LINE (914) 741-6606 for details. Talk-in WB2ZII/R 147.06(+) PL 114.8/2A. 10/00

Yonkers Amateur Radio Club, (YARC). Meets 2nd Sun./monthly, 10 a.m., 1st Pct., Yonkers Police Station, E. Grassy Sprain Rd., Yonkers, NY. Info: P.O. Box 378, Centuck Sta., Yonkers, NY 10710. (914) 963-1021. 146.865(-), 440.150(+). 2/01

NORTH CAROLINA

Stanly County Amateur Radio Club. Stanfield, NC. Meets 4th Thurs./monthly, 7 p.m. Talk-in 146.985(-) for location. Wed. net 9 p.m. 146.985(-). Fri. tech net 9 p.m. 147.390(+). Ph: (704) 888-4815. Web page: www.qsl.net/SCARC/ 5/00

OHIO

Ashtabula County ARC. Ken Stenback, W8KS (964-7316). County Vo-Ed School, Jefferson, OH. Meets 3rd Tue./monthly, 7:30 p.m., County rptr., 146.715(-). 1/01

Clyde Amateur Radio Society (CARS). Meets 2nd Tue./monthly, 7:30 p.m., Municipal Bldg., Clyde, OH 43410. NF8E rptr. 145.35(-) and 442.625(+) MHz. Net Sun. 9 p.m. Info: E. Remaley, KA8CAS. 10/00

Western Reserve Radio Assoc. P.O. Box 81252, Cleveland, OH 44181-0252. Meets 2nd Wed./monthly, 7:30 p.m., Jenkins Communications Cntr., Main St., Olmsted Falls, OH. Info: C. Bade, W8CJB, Sec., 146.73(-), 444.900(+) MHz. 10/00

OREGON

Central Oregon Radio Amateurs, Ltd. (CORA). P.O. Box 723, Bend, OR 97709. Meets last Thur./monthly, 7 p.m., Bend Sr. Ctr., 1036 NE 5th, Bend, OR. 146.940(-) MHz. Info: (541) 388-3831. 10/00

Hoodview Amateur Radio Club. P.O. Box 20624, Portland, OR 97220. Meets 3rd Thurs./monthly, 7:30 p.m., Mt. Hood Com. College/Gresham, Rm 1001. Rptrs: 147.28(+), 448.475(-5) (tone 167.9) 5/00

Umpqua Valley Amateur Radio Club, Inc. P.O. Box 925, Roseburg, OR 97470. Meets 3rd Thurs./monthly, 7:30 p.m., Douglas County Court House, Rm. 310, Roseburg, OR. Info: WØQOT/R 147.12(+) (PL100) or (541) 863-7692. 7/00

PENNSYLVANIA

Mercer County ARC, W3LIF. P.O. Box 996, Sharon, PA 16146. Meets 4th Tue./monthly, 7:30 p.m., Shenango Valley Med. Ctr, Farrell, PA. Net, Thurs. 9 p.m. on 145.35(-) W3LIF, Digi. 145.Ø5. 6/00

Mid-Atlantic ARC, (MARC), WSNWA. Meets 3rd Thurs./monthly, 8 p.m., Radnor Mem. Library, Wayne, PA. Rtrs 147.06, 145.13. Net, Sun., 8:30 p,m, http://www.marc-radio.org 11/00

TEXAS

Brazos Valley Amateur Radio Club, (B-VARC). P.O. Box 1630, Missouri City, TX 77459. Meets 1st Thurs./monthly, 7 p.m., Sugar Land Community Ctr., 226 Matlage Way., Sugar Land, TX. 12/00

VIRGINIA

Mt. Vernon Amateur Radio Club, (MVARC). Meets 2nd Thur./monthly (except Dec.), 7:30 p.m., Mt. Vernon Gov. Cntr, 2511 Parkers Ln., Alexandria, VA. Contact: Bob, KT4KS, (703) 765-2313. E-mail: mvarc@juno.com, http://www.mvarc.org/, Net: Tues. 8:30 p.m. 146.655-. 10/00

Ole Virginia Hams ARC, (OVH). Meets 3rd Mon./monthly, 8 p.m., Northern Virginia Electric Coop. Tech Cntr, 5399 Wellington Rd., Gainesville, VA. Info: Mary Lu, KB4EFP, (703) 369-2877. http://www.qsl.net/olevahams 3/01

Portsmouth ARC. Meets 4th Thur./monthly, 7:30 p.m., Am. Red Cross Chapter house, 700 London Blvd., Portsmouth, VA. Talk-in 146.850. Info: C.I Clements, Pres. (757) 484-0569. http://www.series2000.com/users/wa4nvi/parc/htm 4/00

Southern Peninsula Amateur Radio Klub, W4QR (SPARK). Meets 1st Tue./monthly Sal. Army Com. Bldg., Hampton, VA. Rptrs 146.73(-), 449.55(-), VE Exam Info: (757) 898-8031, W4RTZ. 3/01

Virginia Beach ARC. Meets 1st Thurs./monthly, 7:30 p.m., Virginia Wesleyan College, Wesleyan Dr. off N. Hampton, Village 2 Commons, Graybeale Bldg., Virginia Bch, VA. 2/01

WASHINGTON

The Mike & Key Amateur Radio Club. Meets 3rd Sat./monthly, 10 a.m., Salvation Army Renton HQ., 720 Tobin St., Renton, WA. Talk-in on 146.82(-) (103.5 CTCSS) rptr. Doors open 9:30 a.m. 5/00

WEST VIRGINIA

Jackson County Amateur Radio Club. Meets 1st Thurs./monthly, 7:30 p.m., Saint John Episcopal Church of Ripley. Net Mon. 9 p.m. on 146.67(-) WD8JNU/R. Info: D. Tennant, N8ZYB, Rt. 1, Box 188, Mt. Alto, WV 25264. 7/00

Tri-State Amateur Radio Assn. Meets 3rd Tues./monthly, 7p.m., Museum of Radio & Tech., 1640 Florence Ave., Huntington, WV 25701. (304) 525-8890 5/00

WYOMING

University ARC. Meets 1st Tues./monthly, 7:30 p.m., University of Wyoming, Engineering Bldg., rm. 2100, Laramie, WY. 146.01/61 12/00

NATIONAL

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To subscribe call: 1-800-366-9192

How does this strike you?

Lightning, that is. Well, I sure hope you don't get blasted the way I did one day when a summer storm caught me off guard. It came through quickly, and I hadn't taken the precaution of disconnecting my station. When the tower took a direct hit, the inside of my trusty Yaesu FT-101 became a fireball that burned the outline of the rig's ventilation louvers right into the wooden desktop! You can bet that after THAT happened, I started disconnecting the antennas whenever I was done using the station.

Q: What should you do when you hear of approaching thunderstorms?

A: Yes, I know you should look for your umbrella, but Hams know that you should also secure your station against possible lightning damage.

Even though it's winter here in Minnesota, we started experiencing some odd problems with our dipole antenna system at HANDI-HAM headquarters station WØZSW. The antenna seemed to be intermittent, and it was driving us nuts, because we had checked the coax, and every connection. The problem turned out to be an in-line lightning arrestor, and once it was replaced with a barrel connector, all was right and we were back on the air. We deduced that the lightning arrestor was damaged during a thunderstorm months before, when a lightning strike took out two of our office computers. Why were no radios damaged? Maybe the lightning arrestor discharged to ground as it was designed to do, but sustained damage in the process. Why didn't the antenna problem show up immediately?

Lightning arrestors are really only designed to discharge tiny amounts of current to ground, hopefully preventing the buildup of a charge large enough to cause a lightning strike. In a direct strike, or even a collateral strike, all bets are off. The best way to protect your gear is to disconnect the antenna, AC power lines, and phone line from your station. This is a bit trickier these days, when computers connected to the phone lines are also used as rig control devices or part of an integrated digital modes and logging system. Ideally, one disconnects all AC lines to all equipment, then the phone line, and finally the antenna feedlines. During this procedure, care is taken to avoid handling grounded antenna lines and "hot" equipment at the same time.

Experienced operators know all this, and willingly preach these safety procedures to newbies, but don't always follow their own advice. Why? Because it can be a time-consuming bother to disconnect everything several times a week during thunderstorm season.

Now imagine that you are a Ham with a disability. You have thousands of dollars invested in your station, and you know the consequences of lightning damage. You should disconnect your gear before the storm arrives.

Dr. Tom Linde, KZØT, writes: "At the next convenient time, will you ask the readership to send in some of their thoughts on disconnecting Yagis, which are attached to expensive radios, especially when the operator doesn't have the physical skills to do the obvious thing? With a new 13 element 2-meter beam working well, but a prime target for Mother Nature's zaps, I find myself in the midst of some big-time domestic concerns. Who wants to have a bunch of hardware get fried?"

Dr. Tom, a HANDI-HAM member, offers the ***Worldradio*** readership this challenge: Design a way to quickly disconnect station equipment, especially the feedlines, quickly and easily. Make it possible for someone with limited strength, reach, or motor skills to perform the necessary task easily and safely. Bonus: Anyone who needs to disconnect a station quickly, whether they have a disability or not, can benefit from this project! It's not too early to think about lightning protection, so please consider Tom's challenge and help us with a design to get this job done.

Submit your ideas to: KZØT Challenge, Courage HANDI-HAM System, 3915 Golden Valley Rd., Golden Valley, MN 55422; handiham@mtn.org.

— Patrick Tice, WAØTDA, Manager, Courage HANDI-HAM System; 612/520-0515 voice; 612/520-0577 FAX; 612/520-0245 TTY; handiham@mtn.org; www.mtn.org/handiham.

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CW will survive restructuring

Nancy Kott, WZ8C

I am having trouble writing my column this month. Usually, when I sit down at my computer to write Positively CW, words flow freely and smoothly. As regular readers know, Morse code is a big part of my life. Along with writing this column, I am the North American representative of FISTS CW Club (the fastest growing Ham club in the world), as well as the SysOp for the Morse code forum on Compuserve and moderator of the FISTS CW reflector. Morse code is important to me, and a topic which I am never at a loss to discuss. Finding something positive about Amateur Radio and Morse code comes naturally to me because it is such a large part of my life. I enjoy it thoroughly.

Although you are reading this in April, I am writing this in January when the news of the FCC Restructuring has just been released. The basic points of the restructuring include: reducing the license classes from six to three which eliminates the "Plus" designator making it impossible to tell if a person has passed the code exam, and lowering the Morse requirement to 5 words per minute for the General and Extra classes.

When I first heard the news, it was by e-mail from a friend. I thought it was a joke, it must be a rumor. The FCC could not have actually made that decision! Then phone calls and more e-mail began coming in, and I realized it was true. I was devastated. My first thought was, "Well, this is the end of the world as we know it." Then anger set in. I looked for someone or something to blame: the FCC, ARRL, apathetic Hams, commercial interests, or maybe it was my fault. Was I to blame for trying to keep this column and the FISTS CW Club as non-political? Could I have used both as a forum to call people to action? Would they have listened?

I went through all the classic stages of grief; from denial to wanting to throw my rig in the lake. Right now I feel a profound sadness at the direction that the FCC is steering Amateur Radio. It is going to be a long time before I get to the acceptance state. I think the FCC will realize, too late, that it isn't the code requirement that is holding back desirable growth of the amateur service, and that the type of growth experienced by lowering the standards of admission to the amateur bands is not going to be a desirable one.

Concerning me most is the potential loss of the CW frequencies. Although this was not addressed in the FCC restructuring, surely this loss will come up in the future as more newly licensed SSB users over-populate the already-crowded sideband frequencies. The best way to protect our CW frequencies is to USE them. Get on the air! No matter what your code speed, this is the best way to improve your CW skills. Who knows, some of the newly-licensed people may tune the bands from the SSB frequencies and become intrigued and challenged by what they hear and, perhaps, become motivated to give CW a try.

I am thankful to all who write such nice encouraging letters in response to this column. Without your mail I would be totally without hope for the future of this hobby. It is a constant reminder that there are many many Hams who love Morse code as I do, and that they are out there having fun with it! And that's what it's all about.

Mobile CW

In some previous columns I asked about operating mobile. It's not my cup of tea; I have tried to use a cell phone while driving and nearly ran off the road. I can't imagine trying to send code and drive at the same time. However, many Hams are a lot better at multi-tasking than I am!

Dwight Wygant, W6AR, from Palmdale, California, writes that he frequently operates mobile. One of his most memorable chats took place one night in June of 1994 at 10 p.m. He was in his Jeep Cherokee and just happened to listen to the 10-meter band to see if by chance there was some activity. On 28.315 there were five or six people conducting a single sideband net.

As he listened, he determined they were from the state of Washington and Oregon. He waited until there was a lull in the conversation, then took out his microphone and gave his call sign three or four times. No response. He then hooked up his straight key and waited for another clear time. This time he transmitted BK (or Break) dadididit, dadidah (bk or Break).

The control operator of the net Loran Nelson, KB7YTJ, asked everyone to stand by, then said, "go ahead the breaking station on Morse code." He gave his call sign (at that time he was AC6AU/M, not W6AR) then K. Loran came back, asking what the /M meant. He transmitted the word MOBILE in Code. Still on SSB, she told Dwight that he was

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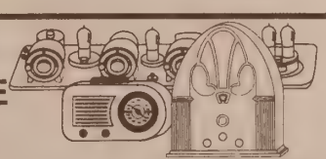

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Positively CW

the first Morse code mobile she had ever worked. After that, Loran and Dwight worked cross mode for over ten minutes! When Loran was able to hear Dwight's signal but not his sideband transmission, Dwight realized how important Morse code can be in an emergency. The QSL card from that chat is one of his most cherished cards.

Dwight's other favorite mobile contact is W2CVT, operating from the home of Samuel F.B. Morse. He got off work at midnight and stayed up all night until the early morning when W2CVT first came on the band. Dwight went out to his vehicle to work them mobile Morse code. After he contacted W2CVT he went in the house and went to bed.

The only way to make contact with W2CVT is by Morse code.

Morse, the artist

Speaking of Samuel F.B. Morse, I have had the pleasure to come across a book about the paintings done by Morse. It is written by William Kloss and titled Samuel F. B. Morse. It is published by Harry Abrams, in association with the Smithsonian Institute. Morse was a very accomplished and prolific portrait painter. I've just started reading it, but it's fascinating and gives quite an insight into Morse's life apart from the usual things we hear about the telegraph. I don't know if it's still available for purchase from the publisher, but I hope it is because the copy I have is borrowed and I would like to get one for my own Morse collection!

Well, I guess this column wasn't that difficult to write after all. Once I get talking about the code, it is hard to shut me up. But my space allotment is at an end. I'd like to leave you with this thought. Regardless of what the FCC does, the only way this beloved hobby that we share can be killed is if we let it die. Just because the legal standards are lowered does not mean that we have to hold ourselves to lower standards. We are Morse operators, with a proud tradition and heritage. As long as we are on the air making music with our keys, our mode is alive and well. And they can't take that away from us.

— Nancy Kott, WZ8C, can be reached at: P.O. Box 47, Hadley, MI 48440-0047 or via email at: nancy@tir.com.

Inside Amateur Radio

The following story has been excerpted from Inside Amateur Radio, *by the late Lenore Jensen, W6NAZ. The book can be purchased from Worldradio Books, P.O. Box 189490, Sacramento, CA 95818. Price is $9.00 plus $2.00 shipping and handling. CA residents please add 70¢ sales tax.*

The bridge

Four American amateur operators, all "DXers" (always looking for new countries on the air) decided to make a trip to mainland China. It was 1980. One of them was Irv Emig, W6GC, of Manhattan Beach, California. He remembers,

"We did a little advance planning hoping to meet someone interested in encouraging that government to once again allow Ham radio operation in China. At the time, there was none.

"It turned out that we met with officials of the All Chinese Sports Association in their large and spacious building in downtown Beijing. For this meeting, the Chinese officials had graciously located two amateurs who had been on the air before the cultural revolution shut them down.

"We were taken to a conference room and were formally introduced to the Chinese Hams, who did not speak English. We all smiled and bowed to each other, no one quite sure what to do next.

"Finally our senior member, the world-famous amateur Don Wallace, W6AM, walked over to one and held out his hand. The man offered his as well. Don took the hand and pressed his fingers into it, in simulated Morse code, a silent 'CQ', the international call for an answer.

"It was a remarkable moment as the Chinese amateur's face suddenly lit up and he said, out loud, 'Ah! Say Coo! Say Coo!' Ham radio had bridged the language barrier. It was indeed an emotional moment for our group.

"The Chinese Hams explained to our hosts why we suddenly were so enthusiastic. We like to think the encounter made a step forward to eventual Amateur Radio operation from China."

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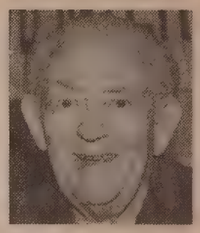
Y2K 10-10 programs update



Chuck Imsande, W6YLJ
10-10 19636

The interest in the 10-10 Y2K programs has been overwhelming. The challenge to make 2000 contacts in the year 2000 (2K in Y2K) has been met by at least one 10-10 member. Cliff Taylor, WB4FBS 10-10 #48461, of Elmendorf, TX, made his 2,000th contact at 1742Z on 24 January 2000. Cliff's #2,000 contact was made with Dennis, K4KTL #39473. Congratulations to Cliff for being the first to meet the 2000 contact challenge.

One member, Thomas Hood, NW7US #56526, has placed his 2K in 2K log on his web site for all to see. The day I checked (02-01-00) he had 150 contacts listed. Thomas calls his web site "Amateur Radio Command Center" and it certainly is just that! His web site can be found at: http://hfradio.org and it's worth while to spend a little time there. He has a link to the 10-10 web site and a number of amateur related subjects. It is worth a visit to see all that is available.

A number of members have indicated that the rules for the 2K in 2K Challenge, which allow duplicate contacts, as long as they are in a different 24-hour period, make the Challenge too easy. Maybe allowing duplicate contacts was just too easy for those serious in meeting the 2,000 contact challenge using contacts with either members or non-members.

So, for those who wish to 'do it the hard way,' another version of 2K in 2K has been announced, the "ALL DIRECT." This additional challenge is going to be quite a bit tougher. The "2K in 2K All Direct" will allow NO dupes, and only contacts with 10-10 members. For those interested in the All Direct Challenge, here are the rules:

1. Work 2,000 different 10-10 members from 01 January 2000 through 31 December 2000.

2. Log to be submitted in the following form: a. List of 10-10 numbers in ascending order (lowest number first),Call, Name, QTH (state or country) and date of contact. b. Dupe sheet not required c. Proof of dues required with submittal of log. d. Log submittal deadline 31 January 2001.

A handsome wood framed certificate will be awarded to all who meet the All Direct Challenge.

Now here is the best part. You can compete in both 2K in Y2K challenges. All contacts made in the original version (dupes and non-member contacts) count in the All Direct version. The log requirements are slightly different; so check the rules for both challenges. Jim Hardy, K4HAV #17605, has a log print out for the WIN1010 program for the original version and he will provide a log print out for the All Direct Version. Check Jim's web site at: http://hds.net/win1010dl.htm for information. Also information can be found on the 10-10 web site at: www.ten-ten.org.

2,000 new members in 2000

The other challenge for 10-10 members to enroll 2,000 new members in the year 2000 is off to a great start. If the new member applications received in early January are an indication of the activity for the year, this challenge can be met without a doubt. The 2,000 new member challenge is for members to see how many new member applications they can get their call and 10-10 number listed on. Here are the results of the early January total:

7 listings — WB4FBS #48461
7 listings — W3EHZ # 39561
5 listings — KCØCNZ # 70882
4 listings — WB6CZO #2988
4 listings — VO1TX #42047
4 listings — VO1GDX #58952
4 listings — KE6DSQ #67300
4 listings — AA6ZW #62075
3 listings — 12 members

If you have a computer, the logging of either of the 2K in Y2K programs can be a simple task. Check Jim Hardy's web site at: http://hds.net for information about the free download. As a courtesy and service to 10-10 members Jim has removed the limit of 25 QSOs from his Demo Program Daily Log module and from now until 01/01/2001, the WIN 1010 Demo Program will accept all contacts entered into the Daily Log module and will print out your log. All other parts of the WIN1010 program will still run in the Demo Mode. For those who cannot download the file, Jim will send you a CD with the program for $10.00 to cover handling and mailing costs. This CD will include the FCC Windows program and database. If you should decide later to buy the complete WIN1010 program, Jim will give you a credit for the $10 toward the program purchase price. Send your request for the CD to: Jim Hardy, K4HAV, P.O. Box 7304, Tifton, GA 31793-7304. How easy can it get? Hold all logs until after the Y2K Party is completed (2400 UTC 31 December 2000). A paper log will be available for download from the 10-10 web site, www.ten-ten.org. An announcement will be made later in the year as to where to send your logs.

If you have any questions on either of the Y2K programs, send your questions direct to me via e-mail at: w6ylj@arrl.net.

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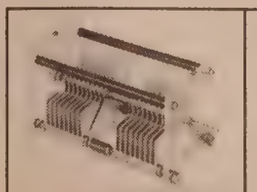
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10-10 web site

Everything you will want to know about 10-10 is listed on the 10-10 web site. The address is www.ten-ten.org. Check the web site for answers to most of your questions about the 10-10 organization, QSO Parties, Awards, and just about anything else.

New DX members

We welcome another group of new 10-10 DX members. The latest list of new DX members include: DL1KDW #71010; GØIUE #71011; MIØCBH #71012; VE2LHP #71013; GØGZS #71014; VE4GE #71015; 4Z5GV # 71016; VY1MB #71017; and JY4NE #71018. Please welcome these new DX members if you make a contact.

10-10 daily nets

Two daily nets are held by 10-10 Monday through Saturday (never on Sunday) at 1800Z. One net is held on 28.380 and the other net at 28.800. Net controls are located in various parts of the country, including one in Canada and one in the British Virgin Islands. Most net controls have an assistant net control in a different part of the country, allowing relays to make contacts. With band conditions being good most days, you should be able to hear either the net control or the assistant. How about checking into the daily nets and collecting a few new 10-10 numbers? If you are attempting to collect your 10 10-10 numbers for your application, the daily nets are a good place to collect numbers in a short time. Check out the 10-10 daily nets at 1800Z on either 28.300 or 28.800.

10-10 at Dayton

Yes, 10-10 will be at the Dayton Hamvention, 19-21 May 2000. There will be a 10-10 forum, and for the first time, 10-10 will have a booth. If you are at Dayton this year, please attend the 10-10 forum and stop by the 10-10 booth.

Annual Hill Country 10-10 picnic

The 12th Annual 10-10 Hill Country Picnic will be held this year on 04 June 2000, at the QTH of Jack, K5CC #50708. This is a great 10-10 event held in June each year and attended by a group of 10-10'ers from far and near. The BBQ is one of the greatest and the friendship is the warmest. Speaking from experience, I can truly say, this is one of the best 10-10 events. For information contact Jack Moore, K5CC #50708, 371 Ridge Creek Lane, Bulverde, TX 78163-2871 or e-mail at: k5cc@gvtc.com.

Information about 10-10?

If you would like information about 10-10, and how you can become a member and receive your very own unique 10-10 number send $2.00 and an address label for the return of your information package to: 10-10 International Net, Inc., Attention: Information Package, 643 N. 98th Street - PMB #142, Omaha, NE 68114-2342. No SASE please as the information package requires a 9 x 12 envelope. You will receive a copy of the Information Brochure, which contains everything you want to know about the 10-10 organization, a listing of all 10-10 Chapters, their day, time, and frequency of net operation and an application form. Also enclosed will be a copy of the QSO Party Information Brochure and a copy of the latest issue of the *10-10 International News*, the 32 page quarterly magazine.

If your membership in 10-10 has expired and you would like to renew your dues, send your dues ($10.00/year or $25.00 for 3-years) to: 10-10 International Net, Inc., Attention: Dues Renewal, 643 N. 98th Street – PMB #142, Omaha, NE 68114-2342. You will become an ACTIVE member again and receive all of the benefits of 10-10 including the quarterly *10-10 International News*. And, please do not forget to include a donation to the Scholarship Fund along with your dues renewal.

Remember 10-10 numbers are issued for life and your originally issued number is always yours. If you have lost, or forgotten, your 10-10 number, send a #10 SASE to the above marked to: Attention: 10-10 Number, and your original 10-10 number will be sent back to you.

Chuck Imsande, W6YLJ #19636, 10-10 Vice President, 20815 Desert Sands Drive, Sun City, AZ 85375-5443 or e-mail at: w6ylj@arrl.net

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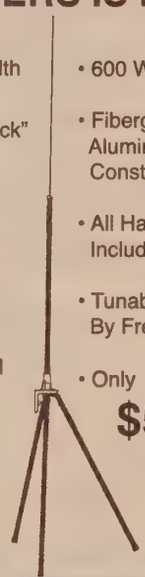

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Realistic antenna investment

(The case for wire antennas)

Al P. LaPlaca, W2WW

Most modern transceivers cover nine bands, some ten bands, and at least two cover eleven! But the average amateur limits him/herself to either putting up a triband yagi and being content with operation on only three bands, and/or a multiband vertical to include the WARC bands and limited bandwidth operation on the lower frquencies. By the time one's done buying all of that "educated" aluminum (and a tower and rotor for the beam) the wallet is well over $1,000 lighter. Such is the cost of modern antenna technology!

I seriously question whether all of that investment in an antenna farm is really worth it for the average Ham. Sure, it probably is for the serious ("World Class") Contester or DXer, but for the rest of us, I think it's financial overkill. When I first got on the air, over 46 years ago, most Hams were having thousands of wonderful hours of operating enjoyment, and working plenty of DX, without having had to spend half a month's pay (or more!) for antennas. And it's still being done today by some, as witnessed by the number of G5RV and similar type antennas one hears being used on the bands. While some may find this hard to believe, wire antennas do work. And, when homemade, are very inexpensive. Even if one goes first class and buys pre-assembled, packaged wire antennas, the cost is approximately one-tenth (or less) than that of the average triband beam — and that single wire antenna will operate on any band that your transceiver will, if you use a transmatch. The addition of transmatch will also allow you to operate on any frequency in any band and have the rig always looking into a very low SWR. No worries about setting element dimensions for CW, midband or SSB portions for a particular band. Just turn a knob or two on the transmatch and watch the reflected power drop to near zero Watts. It's a nice feeling, and a smart way to operate.

Let's continue on the subject of cost for a moment. Truth #1 — copper wire is far less than expensive aluminum tubing. Rule #1 — shop the Ham flea markets for such things as insulators, ladder line (or windowed twinlead) and good-quality (strong and UV-resistant) rope (for antenna tie-offs and support). What kind of wire are we talking about? Copperweld or stranded copper wire should be used for coaxial-fed wire antennas. Firstly, because it can better support the weight of the coax and secondly, it doesn't stretch and therefore its resonant point won't change significantly because of detuning due to length change. Coaxially-fed antennas are generally single-band affairs (although a 40M dipole works very nicely on 15M as well) and the SWR limitation of coax are such that the antenna should be dimensionally stable. It should not stretch with time and weather.

The case of multiband wire antenna fed with ladder line (or windowed twinlead) is quite a different story. The antenna dimensions are not all that critical (any reactance introduced by gradual lengthening of the antenna with time can easily be dealt with by twisting those knobs on the transmatch). Solid copper house wire (the larger the diameter, the better — look for #10 or #12 gauge) is fine for this type of antenna and can be obtained in quantity (500 foot spools, for example) in any home-improvement outlet store and some hardware stores, for less than you would imagine. You can make a great many antennas (and their replacements, too) from a 500 foot spool of wire. Think about it. Leaving the plastic insulation on the wire when you make your antenna protects the copper from the effects of weathering. Good ceramic insulators are fairly cheap too, especially if one carefully shops the Ham flea markets for them. And 450-Ohm window line is about 1/8 the cost, per unit length, of coaxial cable. By the way, that 450-Ohm figure is quite nominal. I

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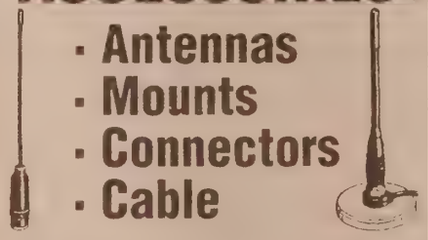
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purchased a 500 foot roll of "450-Ohm window line" at Dayton some years ago and at home carefully measured and calculated the impedance; it worked out to be 444-Ohms. Close enough. It really doesn't matter much with tuned feeders!

And now a word about transmatches. As far as I'm concerned, there should be (at least) one in every shack. It should be installed in the coaxial line segment between the SWR (or power) meter and the antenna. Besides affording the opportunity to keep the rig's output seeing 50 Ohms, the transmatch provides harmonic attenuation, and lessens the possiblity of front-end overload or intermodulation distortion from very strong out-of-band signals. Most available transmatches these days are single-ended affairs, and provide balanced output through and internal 1:4 voltage balun. True balanced output transmatch designs are available for homebrewers in the amateur handbooks. Flea market shoppers can look for Johnson Matchboxes — the smaller of which (the so-called "275-watt unit) will handle up to about 750 Watts of output power on CW and SSB. For higher power outputs, the so-called "kilowatt" Matchbox will handle up to about 3 KW on CW and SSB. Another balanced-output commercial transmatch is the old Harvey Wells Z-Match, if you can find one! If problems are encountered when using balanced feedline output from a conventional transmatch (with its internal voltage balun), it's usually a good idea to switch the unit into single-ended output mode and use an external 1:4 current balun. Current baluns are available from The Radio Works and others, check the ads in the Amateur Radio magazines. The current baluns force the currents in each side of the line to be equal (or nearly so).

Several companies are currently marketing what they call the "universal antenna," which is a dipole between 134-feet and 136-feet long (I told you the length wasn't particularly critical) fed with 100-feet of 450-Ohm window line. Prices are under $40. A good buy. But even so, with careful shopping around for parts and doing it yourself, you can have the same antenna for one-quarter the price (or less). This is true for the G5RV, inverted-vee, windom, delta loop, loop skywire, or whatever. They are all very simple designs and can be built for a fraction of the cost of the commercially-available models.

As I alluded to in the beginning of this article, a great deal of DX was worked through the years before we entered the "era of fancy antennas" we're in now. And simple antennas are still being used, and enjoyed, by a goodly number of amateurs. In the winter 1998/1999 months I worked DXCC (actually a total of 115 countries) on 10M, using only 12 Watts and a G5RV inverted-vee with the apex at 60 feet. So I know, first hand, that a beam is not absolutely necessary to work anything. Also, the wire antennas are much more "neighbor-friendly" than massive configurations of steel and aluminum.

So at least try a wire antenna, for a change. I think you'll be very surprised at the way it works and come to appreciate its other virtures as well.

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QRP limbo: how low can we go?

Ever-improving band conditions and top-notch receiving systems coupled with operators who dare to push the lower limits to almost unbelievable levels are producing some pretty amazing stuff on the QRP front. The Internet QRP reflectors for the last few months have been alive with reports from a growing number of milliwatters — those operators with the passion, stamina and curiosity to play low power limbo to the max.

In most QRP shacks, the answer to "how low can you go?" is determined by the power output of the smallest radio on the operating table. Many of the kits marketed in the last few years run from 1 to 5 watts.

Dropping into the milliwatt range in many cases requires the operator to pop the radio's lid and make internal adjustments to lower output. That often means reducing the drive to the final transistor by turning a board-mounted potentiometer. What a pain.

Seasoned milliwatters will tell you that during the course of a contact it is frequently necessary to vary output to account for changing conditions such as fading (QSB) or interference from other stations (QRM). Setting and re-setting internal components under such circumstances just isn't a realistic option.

Fortunately, there is an easy and effective way to methodically drop your output to a mere whisper without having to go inside the radio — build a resistive step attenuator.

Lest you think this is some new development on the QRP scene, attenuators have been a part of Amateur Radio for many, many years. And these resistive networks have long been used by low power operators to reduce signal levels while maintaining a circuit impedance of 50-ohms.

Placing a properly constructed resistive step attenuator between a tranceiver's antenna output jack and a 50-ohm antenna feedline can allow QRPers to methodically drop power output into the microwatt range.

The first edition of the late Doug DeMaw's, W1FB, "QRP Notebook" features a Ladder-type Power Attenuator designed to drop a transceiver's output in a series of -3 dB steps.

Theoretically, that makes it simple to calculate incremental reduction. If your radio's output is 1 watt, for example, a -3 dB step reduces the output in half. Another -3 dB step results in a decrease of another 50 percent - to 250 milliwatts.

String a series of these -3 dB steps into a switchable ladder and you've got the ability to drop to some pretty incredible power levels — each turn of a switch cutting your power in half from the previous step.

Attenuators come in two styles: Pi and T. DeMaw chose Pi for the unit described in his "QRP Notebook." Circuit diagrams for these "pads," as they are called, can also be found in radio handbooks and design books.

The attenuator is, quite simply, a well managed bunch of resistance. Each step consists of three or more resistors. In the case of the first -3 dB step, one 18-ohm resistor is used in conjunction with two 300-ohm resistors. Add one more 18-ohm and 300-ohm resistor to the string and you've created the second -3 dB step, and so on.

Expanding on DeMaw's idea in his "Notebook," the accompanying photograph shows a nine-step attenuator built at KI6SN — dropping 3 dB with each turn of a cabinet-mounted rotary switch. There's also a double-pole/double-throw toggle switch used to bypass the attenuator altogether. That's particularly handy when you're receiving. Remember, a step attenuator reduces the strength of incoming signals in the same way it reduces the strength of transmitted signals.

You'll count 26 carbon resistors in the KI6SN attenuator — nine at 18 ohms; 10 at 300-ohms. Each is rated at 2-watts.

This unit was designed to work with the NorCal-40 which puts out 1.5-watts. If you're attenuating power levels up to 5-watts, you'll need to consider resistors with higher dissipation ratings. Schematics for Pi-style attenuators can be found in most radio handbooks and design notebooks.

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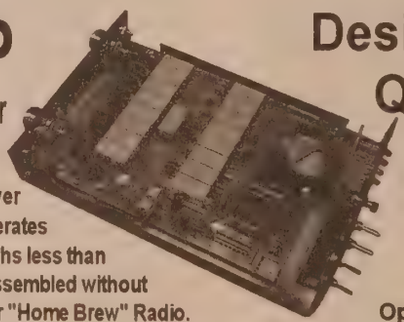

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I was able to find most of the parts needed at the local Radio Shack. I started with an off-the-shelf 2.75 by 3.75-inch experimenter's board (RS 276-168B), a single pole, 12-position rotary switch (RS 275-1385A), a plastic 6x4x2-inch blue experimenter's box (RS 270-1806), a double pole/double throw toggle switch (RS 275-614), and RCA-style phono plugs.

For transceivers already in the 1-watt range, garden variety resistors rated at 2-watts will do the job. For higher power levels, though, you'll have to either parallel lower wattage resistors to get a higher dissipation rating, or order higher-wattage resistors from one of the many parts houses carrying them.

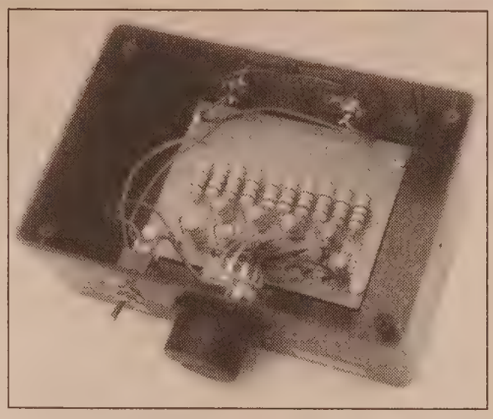
An excellent listing of parts houses where higher-powered resistors are available can be found at the web site of QRP Amateur Radio Club International: www.qrparci.org

Enter the web site and click on QRP Links. If you'd like a schematic of the KI6SN attenuator, send a self addressed, stamped envelope to the address at the top of this column. I'll be happy to mail you a copy of this simple design.

Putting a ladder step attenuator together, though, is only half the fun. Wait until you run it through its paces on the air. Frankly, I was amazed.

Measuring output on an Oak Hills Research WM-1 QRP wattmeter, my NorCal-40 was percolating 1.5 watts on the button. Switching in the attenuator's step No. 1 dropped power to the antenna to 250 milliwatts. "Hmmmm," I thought. "Should be more like 750 milliwatts." Revisiting DeMaw's "Notebook" entry, I read that long leads and stray capacitance can play havoc with an attenuator's accuracy. Looking at the KI6SN configuration, it's certainly feasible that those factors immediately came into play.

Not to worry, though. At least we were attenuating, by golly. Turning the rotary switch to Step No. 2 dropped the NorCal-40 to 190 milliwatts. And Steps 3 through 9 brought ever-lower readings: 100, 75, 49, 33, 25, then 19. We bottomed out at 17 milliwatts. Not bad.



A handful of resistors, a couple of switches and some plugs are the ticket to milliwatt operation using the KI6SN Attenuator.

Granted, this wasn't exactly following the regimented -3 dB per step model, but it was getting me into the double-digit milliwatting region I'd aspired to reach.

Going into single digits will be as simple as reducing the NorCal-40's drive slightly. I can certainly live with a 1-watt output in the bypassed mode. Stepping down with 1-watt as the starting point will result in output falling into the single digits.

You may be wondering if making contacts at the 17 milliwatt level is possible. In a word: Yes! Even with a droopy 40-meter dipole antenna.

On my first call with the KI6SN Attenuator in line, Doug Willoughby, K7GJX, of Apache Junction, AZ, came back. A half-hour chat on 40-meter CW ensued. I've had dozens of QRPpp QSOs since then.

If you'd like to really push the envelope on the miles-per-watt chase, try milliwatting on the upper bands.

Jim Hale, KJ5TF, of Kingston, AR, (35.94N / 93.47W) has been leading the pack on milliwatting in the United States for quite some time. His whisper-power feats on the DX bands have earned him wide acclaim, as well as some miles-per-watt records.

On a morning in early February, Hale reported in a posting to the Internet Mail Group QRP-L that he heard Ed Somoane, CO8LY, CQing from Cuba on 24.898 MHz. Hale called him at 12-milliwatts and exchanged signal reports.

The distance: 1,531 miles. At .012-watts that's 127,583 miles-per-watt — a record for the 12-meter band.

Hale was using an Elecraft K2 along with a Ten Tec 290 attenuator, and Oak Hills Research WM-2 wattmeter.

He reported his antenna to be "a crooked tree quad pointed at Europe — not Cuba." Hale speculates that CO8LY must have had a great antenna "and ears — but he was working European DX before he heard me. And that suggests that his beam was pointed there, too."

A remarkable feat in any event!

Hale's website is a must-read for aspiring and practicing milliwatters. It's at: http://www.qsl.net/kj5tf/

We'll have lots more on milliwatting in an upcoming column. Meantime, please keep me posted. In the world of QRP Limbo, just how low do you go?

— *Richard Fisher, KI6SN, can be reached at: 1940 Wetherly Way, Riverside, CA 92506; KI6SN@aol.com.*

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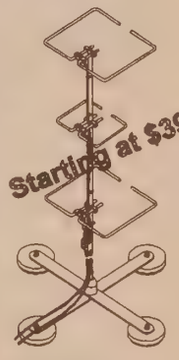

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Full speed ahead, Captain

I received a very interesting e-mail from Dennis Bradley, NØJKH, at the beginning of January. He said he was going to be making an Atlantic crossing aboard a 40 ft. steel pilot house cutter this Spring, and wanted my opinion with respect to propagation programs and propagation literature. This really piqued my interest, so I offered to do the propagation predictions for him (I figured he'd have his hands full with just the boat part). Dennis accepted my offer, and he subsequently e-mailed the details.

One of his friends, Jaap Creutzberg, was visiting the St. Paul area about 10 years ago from England, and liked it so much that he's been coming back for six months of the year ever since. Last Spring while back home in England, Jaap bought the cutter and asked Dennis to help with ferrying it to the U.S. In preparation for this trip, Jaap became KCØGIZ. One of Jaap's friends, a non-ham, will also make the trip.

On board they will have an Icom IC-706MKIIG and an antenna tuner, with the antenna being the 55 ft. insulated backstay. This should allow them to operate on 80 through 10m. They will also have a winlink system for e-mail and radio mail for other winlink folks interested in their route (more about this later). They plan to leave the London area around 01 March (they should be en route by the time you read this), and are expected to arrive in Mobile, AL, around early or mid-May.

Dennis sent me their intended route, the estimated times enroute, and the planned layovers. From the intended route information, I drew their route on a map and divided it into nine segments labeled A through I. See the accompanying figure for the result of this effort. Next I found the latitude and longitude of the mid-point of each segment.

The Route and Segments for the Propagation Plan

A - England to Northern Spain
B- Northern Spain to Southern Spain
C - Southern Spain to Canary Is
D - Canary Is to 1/3 Across Atlantic
E - 1/3 Across to 2/3 Across
F - 2/3 Across to Antigua
G - Antigua to Jamaica
H - Jamaica to Western Cuba
I - Western Cuba to Mobile, AL

A:	46.0N / 2.0W
B:	36.5N / 10.0W
C:	32.8N / 16.8W
D:	27.1N / 24.7W
E:	24.4N / 39.6W
F:	20.3N / 53.7W
G:	17.5N / 69.4W
H:	20.0N / 79.0W
I:	26.5N / 84.5W

Table I Segment Midpoints for Propagation Prediction Program

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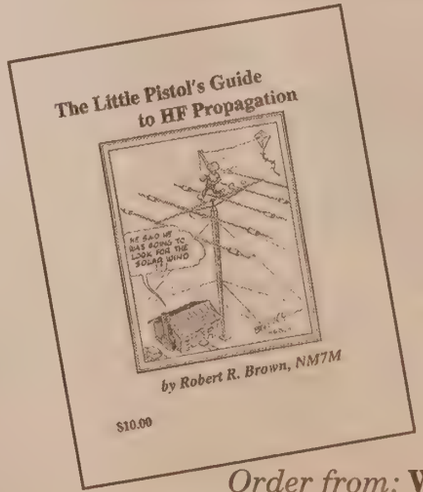

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From the estimated times enroute and the planned layovers, I also estimated on what date they would be at the mid-point of each segment. With the dates known, I used Figure 2 of last month's column to estimate the SSN (smoothed sunspot number) for the dates. All of this information (latitude and longitude of the mid-point of each segment, the date at the mid-points, and the SSN) would allow me to run propagation predictions for the entire route. But I still needed target areas for the predictions.

For the winlink system, they will use N8PGR, KN6KB, and K4CJX for their Internet traffic. They also want to keep in touch with friends in St. Paul — Don Greenheck, NØJPG, and his wife Twila, NØJPH. That defined several of the target areas. I also figured they'd like to make contact with some of the places along the route when either coming toward them or going away from them. That defined a bunch more target areas. Finally I added most of the rest of the U.S. as target areas. This resulted in the following eleven target areas:

W0	W4	W8
G	CT	EA8
V2	6Y	W2
W5	W6	

Table II Target Areas for Propagation Prediction Program

With everything now defined, I ran predictions from each of the nine mid-points to each of the eleven target areas. That's quite a bit of data, and thus it was put into a hard-bound booklet. I organized it by the nine segments. All they have to do is go to the proper segment and select one of the eleven target areas to see what band(s) should provide the best opportunity at any given time.

If all goes well, they should be just starting the Canary Islands-to-Antigua leg when you read this. If you're interested in following their progress, send an e-mail as follows: TO: qth@winlink.org, SUBJECT: position request

In the body type the single line: NØJKH

Check your e-mail in a couple of minutes. You should have one from qth@winlink.org with their last reported latitude/longitude. For the last three reports, type NØJKH 3. For all the reports, type NØJKH 999.

They also plan to be on the Maritime Mobile nets, so check those out if you want to make a voice QSO. They'll probably be on CW, too. With two Hams on-board, I suspect there will be plenty of time for Amateur Radio in order to pass the time — unless the weather is exciting, of course.

— Carl Luetzelschwab, K9LA, can be reached at: 1227 Pion Rd., Ft. Wayne, IN 46845 or you can e-mail him at: k9la@gte.net.

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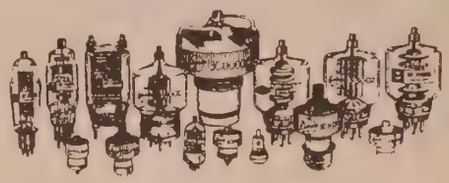

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3CX400U7	3CX1500A7	4CX400A	4CX15000A
3CX800A7	3CX3000A7	4CX800A	5CX1500A / B

and many others not shown

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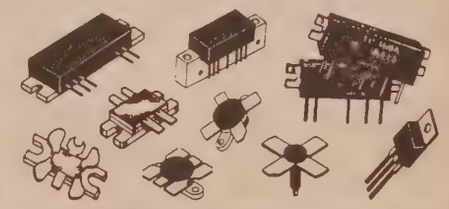

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Bob Heil, K9EID

Understanding the input transducer

Introducing the microphone

One of the most misunderstood and misused pieces of Amateur Radio equipment is without a doubt the most important to voice communication — the microphone!

Usually, if the plug on the end of cable fits, or better yet, if it is a matching microphone and the meter moves it must be okay. Matching means that it is painted the same color as your radio. Of course, your buddies on the frequency all told you you sound great so heck, what's the big deal?

The big deal is that most of the transmitters, when properly aligned and adjusted, sound practically the same. In a very interesting test conducted in our testing lab, we made various transmissions using the same audio input equipment — a wideband studio microphone and a Symetrix 528 studio processor, equalized and gated properly. The audio equipment was plugged into five different transmitters. Icom 746, Yaesu FT-1000D, Kenwood 570D, Kenwood 440S and an ICOM 706. There were eight stations listening at the time. No one could pick out when we changed transmitters and definitely no one could tell WHICH model was on the air at the time. It is most interesting to note that we aligned each of these transmitters properly before this test. The carrier oscillators were dead in the center of the filters. All of the rigs were set up with as close to 2.1 kHz as their filters would allow. Audio input level was monitored on the output oscilliscope so that the correct input level was not clipping or distorting the transmitted signal.

It proves that the most important link in the SOUND of your transmitted signal is the microphone plugged into that transmitter AND how it was adjusted and physically used. If everyone could or would use a scope to monitor their transmitted signal, MANY of the horrible, distorted signals heard today would not occur. But, of course, that is NOT the case. Probably the worst method to listen to your signal is through the built in 'monitor.' About the only thing a monitor can tell you is that your microphone cable is working! The only way to really hear how you sound EXACTLY to the outside world is to listen to a receiver feeding a pair of high quality headphones. Only THEN will you hear how and what you are transmitting.

This method of monitoring your signal is vital when adjusting the transmit equalization and the terrific DSP functions available in many of the late model rigs. So many operators don't pay attention to this all important feature as it is something they have never had before and they are simply unfamiliar with what it does AND how to make it do what is needed. Don't be afraid to adjust the equalization. Connect your transmitter to a dummy load and put on those headphones! Listening to that second receiver will let you hear all of those golden — or NOT so golden — tones as you run through the various tonal adjustments.

The microphone is so very important. Most of the 'matching' microphones are NOT designed for communications. They aren't even built by the manufacturers who 'match' them up to their transmitters! They come from an outside source of O.E.M. manufacturers building microphones mainly for paging, public address or sound reinforcement. The mics are built into a silly little desk stand, painted the same color as the rig and sold to the world. How sad. One has to LISTEN — mentally dissect what is being transmitted. There are many things that make the microphone sound good, bad or simply terrible.

One of the major factors in the sound of your station is how you use the microphone. One of the worst things that ever hit the Amateur Radio phone operator was the desk stand! The desk stand allows you to sit back around a foot or two — allowing it to pick up more ambient room noise — the amplifier's blower, kid's TV set in the next room and room echos, all being much louder than your voice. If one would pay attention to radio station broadcasters, it will become very apparent that they all use a balanced microphone boom with shock mounts to hold that microphone. That keeps out low frequency resonant thumps and bumps as the desk is hit or touched. The boom allows the microphone to be held about one inch from your mouth. A high quality studio communications microphone will produce better transient response — the ability to respond to rapidly changing sound waves. Your voice must physically move the diaphram of the microphone. The amount of time it takes for this movement to occur depends an the weight (or mass) of the diaphram and how far away from that diaphram you are. It is this transient response that gives that added punch and clarity to the transmitted signal.

Of course, when talking close to a microphone, some voices are more powerful than others and can cause 'p' pops or breath blasts which can cause a pumping or popping sound that will accompany the voice. This can easily be corrected by using an acoustically transparent foam windscreen over the microphone. Many of the professional microphones will have some type of foam windscreen built inside.

Most all of the transceivers today have terrific equalizers, variable filters and DSP functions that give the operator tremendous latitude. It becomes so very important that we learn more about WHAT we are inputing to the transmitters and how the audio is adjusted, keeping in mind that the human voice has usable frequencies reaching down around 100 Hz up through 6 to 8 kHz. The filter networks roll off around -12 to -18 db so there is still energy being transmitted beyond the filter cutoffs. It's those frequencies that really add that extra sparkle and coloration in many of the wideband SSB signals being transmitted today.

Drag out that second receiver. Plug in those headphones and let's start LISTENING to the signal we are putting on the air.

Bob Heil, K9EID, can be contacted at: 5800 N. Illinois, Fairview Heights, IL 62208, e-mail: bob@heilsound.com

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Dipoles and doughnuts

An engineering student wrote to Kurt recently. He misunderstood the professor and thought that a dipole had maximum radiation off the ends of the wire. Later he wrote that he was mistaken and that the maximum is off the sides. In a third letter he said that he was still a bit confused.

Kurt sympathizes because he too once suffered through an engineering professor or two who were not clear in their lectures and left their poor students bewildered.

Krusty Old Kurt is here to make the dipole radiation pattern easy to remember. All you need is a doughnut and a pencil. The doughnut should be a nice fat one. Put a mark right in the center of the pencil.

Put the pencil through the hole in the doughnut and center it. Keep it parallel to the ground. The pencil represents a half-wave or shorter dipole and the doughnut represents its radiation pattern in free space.

To find the radiation in any direction just draw an imaginary line from the center of the pencil out in that direction. The more doughnut the line has to go through the more the radiation in that direction.

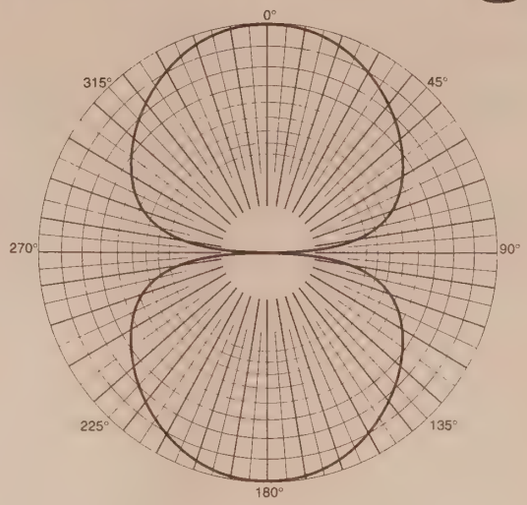
For example, imagine a line going straight up from the center of the pencil. It has to go through the thickest part of the doughnut so this is a direction of maximum radiation. You can rotate this line downward around the wire clear around in a circle and you'll always have maximum radiation.

But now tilt the line away from the vertical in the direction of the wire. As you tilt it the radiation slowly drops off until the line is in the same direction as the wire. Now the line does not touch the doughnut and there is no radiation at all. And at small angles away from the wire there is very little radiation.

Ground reflection

If you move the dipole from outer space to a more convenient location such as your backyard you find that the lower half of the doughnut disappears. The downward radiation from the antenna hits the ground and most of it is reflected upward. This changes the pattern a little giving more gain in most directions.

Most importantly, it affects the low-angle radiation near ground level.



Our imaginary line going straight up still goes through the maximum amount of doughnut and thus indicates maximum radiation. But as you rotate this line around the wire and as it approaches the horizontal, the radiation drops off sharply until, when the line is horizontal, there is no radiation even though the imaginary line goes through the thick part of our half-doughnut. Keep this in mind.

This means you don't get low angle radiation from a horizontal dipole when it is above ground. But the higher up you put it the lower the radiation angle you get. So to work DX raise your dipole as high as you can.

Radiation off the ends

There is no radiation directly off the ends of the wire. The Handbook horizontal pattern for a dipole shows a complete null off the ends. But you want to keep in mind that this is the pattern for zero degree elevation. It does not apply at higher angles.

Look again at your pencil and doughnut. Place your imaginary line right along the antenna wire. Then slowly raise the end of the line. As it goes up it soon hits doughnut. The higher the angle the more the radiation. This is in the direction of the wire but at higher angles. You can work in all directions with your dipole. As a matter of fact the ground reflection gives additional radiation strength at low angles in this compass direction.

As compared to the maximum radiation from the dipole the radiation off the ends is down about 8 dB at 30 degrees elevation. At 15 degrees it is down about 14 dB and at 9 degrees, 18 dB.

This sounds bad but 18 dB is just 3 "S" units. Instead of S9 you'd be S6. So what? If you can do it, tune in the BBC or Radio Netherlands on shortwave AM broadcast. Watch your "S" meter. You'll see fades of 7 to 9 "S" units frequently. The same thing happens in the Amateur Radio bands of course, but your "S" meter doesn't show it because, with SSB or CW, there is no carrier. Three "S" units up or down is a minor difference in the world of F2 layer reflections.

Directivity

Kurt hopes that he has made the radiation pattern of the dipole clear and understandable. If you want maximum signal in a given direction orient the dipole so that direction is off the side. If you want low angle radiation to work DX put it up as high as you can get it.

But if you are restricted by your location to just one way to install your dipole, don't worry. You'll get out in all directions with it. And remember, a full size dipole is almost 100% efficient. Almost all the power you put into it gets radiated. It is very tolerant of nearby absorbing and reflecting objects. These are some of the reasons that the halfwave dipole is the most popular of all for amateur use.

One big mistake you can make in a restricted location is to replace your dipole with a gain antenna. If you have to mount it low to the ground and with trees and buildings surrounding it, you won't get the stated gain from it. And gain antennas have lower radiation resistance and bigger losses. Plus they cost more and don't look as good.

You'll be better off spending your money and efforts to improve your dipole by getting it higher up into the air and further away from trees and buildings.

Got a question for Kurt? Send a letter or an e-mail to: ***Worldradio***, 2120 28th St., Sacramento, CA 95818, e-mail: n6wr@ns.net and we'll pass it along.

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Contest comments

Armond Noble, N6WR

While many shy away from 160M believing that an antenna the size of an aircraft carrier is needed, that's not really the case at all. The recent 160 Meter CW Contest, sponsored by *CQ* magazine, was great. A random length wire, end-fed through a tuner, will put a useful signal on the air. One station we know of works a good amount of 160M DX with nothing more than a 30-foot vertical, top-loaded.

Then there was the SSB Sprint. This contest only lasts four hours, thank goodness! It's a whirling dervish affair.

A station calls CQ. When answered he must give up the frequency to the answering station. He must move at least one kHz before answering another CQ or five kHz before calling CQ again.

You can't let any grass grow under your feet in this one. Even some devoted contesters avoid the Sprint because of the pace. Often a station doesn't even get to call CQ before the pouncer, hearing the previous contact, starts calling the new (fleeting) holder of that frequency.

Next was the CW version of the Sprint. Not a J-38 was heard. This is the domain of keyboards and memory keyers. Talk about swift! In the last hour of the four-hour contest there were stations either over or nudging up to the 300 QSO mark.

Some, desiring to contest, but not wishing to spend the entire weekend at it, might be interested in a multi-single operation where many operators split up the contest in shifts at one station.

Some believe contesting is too rigorous and say contesting is a young man's game. In last year's *CQ* CW WW, Norm Brooks, K6FO, licensed in 1935, worked more than enough countries to qualify for another DXCC. Maybe it is a young man's game after all.

Then, a couple of years ago, the ancient John Minke, N6JM, with a tri-bander that's been up for 20 years, was Division Leader in the ARRL DX Contest.

Incidentally, N6JM, ***Worldradio*** DX Editor has already qualified for the ARRL Millennium award, (100 countries in year 2000) and did it without the benefit of an amplifier.

Most contesters are good guys. You'll hear them slow down their CW if answered by a QRS station. Others on SSB will patiently explain the rules to someone who stumbles into the fray and asks what this is all about.

An enjoyable, and somewhat slower-paced contest is coming up soon, the CQ WPX Contest in both SSB and CW versions. In the WPX, every prefix is a multiplier, so all of the WF6s and the like will be most popular. These contests would be a good place to brush up on CW ability in preparation for the ARRL Field Day. In that one, CW contacts count twice as many points as that of SSB contacts.

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Please send your suggestions to:
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Email your suggestions to us at:
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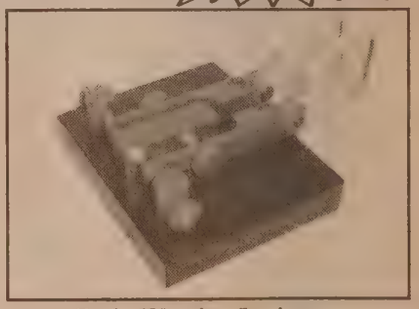

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Dave Goodwin, VE2ZP/VE9CB — Contests Chart

Contest	Date & Time	Bands	QSO points	Multipliers	Exchange	Entry Categories	Entries
SP DX Contest (Poland)	1500z 1 Apr 2359z 2 Apr	160-10M	3pt/QSO Work SP only	Polish provinces (49) SPs will send 2-letter province abbreviation	RST Ser#	Single Op: All bands, single band Multi-op SWL	1mo. Box 320 00-950 Warsaw
Spanish RTTY	1600z 1 Apr 1600z 2 Apr	80-10M RTTY	2pt/DX 1pt/NA x2 on 40, 80m	CQ Zones and Spanish Provinces (52) EA stations will send 1- or 2-letter province abbreviations	RST CQ Zone	Single Op: All bands, single band Multi-op SWL	Box 240 09400 Aranda de Duero (BU)
YLRL DX-YL to NA-YL CW	1400z 7 Apr 0200z 9 Apr	80-10M CW	1pt/QSO YLs in North America work YLs on other continents. Alaska counts as outside NA	DXCC countries ARRL/RAC sections	RST QTH	Single Operator only	30 days WO6X
Japan Int'l DX High-Band CW	2300z 8 Apr 2300z 9 Apr	20-10M CW only	2pt/JA Work JA only	JA Prefectures (50) JAs will send 2-digit prefecture number	RST Ser#	Single Op: Both bands, single band Multi-op	30 Apr Box 59 Kamata Tokyo 144
QRP ARCI Spring QSO Party CW	1200z 8 Apr 2400z 9 Apr	160-6M CW	5pt/QSO with QRPARCI mbr., 4pt/DX non-mbr 2pt/North Am. Non-mbr.	US States, Canadian Provinces and Territories, DXCC countries Multiply your score by 1 of you ran over 5w, by 7 if you ran under 5w, by 10 if you ran under 1w, or by 15 if you ran under 250mw.	RST QTHplus QRPARCI mbr number; non-mbr send pwr	Single op: All bands, High bands (6-10m), Low bands (40-160m) Also "teams of two to five entrants - register your team with N6GA before the contest.	30 days N6GA
King of Spain	1800z 8 Apr 1800z 9 Apr	80-10M CW and SSB	1pt/QSO	Spanish Provinces (52) worked on each band. Spanish stations will send a one- or two-letter province identifier after theSer#	RST Ser#	Single Op Multi-op SWL	16 May Box 220 Madrid Spain
Australian Postcode Contest	0000z 15 Apr 2359z 15 Apr	80-10M CW and SSB	10pt/QSO Work VK only	Australian postal codes. VKs will send a four-digit number after the RST.	RST Ser#	Single op: CW only, SSB only SWL	30 days Oceania DXG Box 929 Aympie QLD 4570 Australia or e-mail: odxg@keylink.com.au
Holyland DX Contest (Israel)	1800z 15 Apr 1800z 16 Apr	160-10M CW & SSB	1pt/QSO x2 on 160-40m Work Israel only	4X,4Z stations will send a five-char. area identifier (ex: E14TA, H08HF). Each unique identifier is a mult on each band	RST Ser#	Single op all bands Multi-op, singletx SWL	31 May Box 17600 Tel Aviv 61176 Israel
Michigan QSO Party (USA)	1800z 18 Apr 0200z 20 Apr 0300-1100z off time tor all entrants	160-2M CW, SSB, FM	1pt/SSB 2pt/CW +5pt bonus for QSOs with K8EPV, W8JXU	For stations outside Michigan: MI counties (83) For MI Stations: MI counties, US States, Canadian oprovinces and territories, DXCC countries	RST Ser# QTH	Single Op Multi-op Mobile	31 May EMARC Box 611230 Port Huron MI 48061-1230 or e-mail: k8dd@contestin.com
European Spring Sprint CW	1500z 18 Apr 1859z 18 Apr	80-20M CW	1pt/QSO	None	your call, other stn's call, Ser#, name	Single operator only	15 days G4BUO
YU DX Contest (Yugoslavia)	1200z 18 Apr 1200z 19 Apr	160-10M CW only	1pt/own ITU Zone 3pt/oth NA 5pt/DX	ITU Zones and Yugoslav prefixes on each band	RST ITU Zone	Single op: Mixed mode, CW only, SSB only Multi-op, singletx	30 days Box 48 11001 Beograd
YLRL DX-YL to NA-YL SSB	1400z 20 Apr 0200z 22 Apr	80-10M SSB	1pt/QSO YLs in North America work YLs on other continents. Alaska counts as outside NA	DXCC countries ARRL/RAC sections	RST QTH	Single Operator only	30 days WO6X
CQ-VHF Spring Weak-Signal Activity Weekend	28-30 Apr Nine 6-hour periods starting at 1800 local time.	SSB, CW and narrow-band digital modes on all Amateur bands above 50MHz Do not use any repeaters or translators.	1pt/50, 144MHz QSO 2pt/222, 432MHz QSO 3pt/902, 1296MHz QSO 4pt/2304MHZ and higher QSO Work each station once per band in each 6-hour period.	Grid squares worked on each band	Grid square	Single Op Fixed Station: - QRP (max. 10w) - QRO (more than 10w out) Multi-op Fixed station: - QRP (max. 10w) - QRO (more than 10w out) Rover	30 days CQ Magazine or e-mail to weekend@cq-amateur-radio.com
MARAC SSB County Hunters Contest	0000z 29 Apr 2359z 30 Apr	80-10M SSB	1pt/US or Cdn 5pt/DX 15./Mobile stn	USA Counties worked regardless of band	RS County QTH	Mobiles Fixed stations	29 May K8CW
Helvetia 26 (Switzerland)	1300z 29 Apr 1300z 30 Apr	160-10M CW & SSB	3pt/QSO Work HB9 only	Swiss Cantons (26) on each band HB9s will send 2-letter Canton abbreviation	RST Ser#	Single op all bands Multi-op singletx SWL	14 Jun HB9DDZ
Nebraska QSO Party (USA)	1700z 29 Apr 1700z 30 Apr	All Amateur bands (exc, 10, 18, 24) all modes	1pt/Fone QSO 2pt/ all other modes	For stations outside Nebraska: NE counties (53) For NE Stations: NE counties, US States, Canadian oprovinces and territories, DXCC countries to a maximum of 30	RST QTH	Single Op Multi-op singletx Mobile Novice/Technician-class licensee	31 May NE QSO Party Box 375 Elkhorn NE 68022-0375
Ontario QSO Party (Canada)	1800z 29 Apr 1800z 30 Apr	160m to microwaves CW, SSB and FM (No FM on 146.52)	1pt/QSO 10pt/VE3ODX, VA3RAC Stations outside Ontario work only Ontario stations	For Ontario stations: Ontario counties, districts, regional municipalities(49), Canadian Provinces, Territories, US States, DXCC For others: Ontario counties, districts, regional municipalities (49) only.	RST QTH Ont. Stations send 3-letter county abbrev.	Single Op all bands mixed mode: High pwr, low pwr, QRP Single Op all bands CW only: Highpwr, low pwr, QRP Single Op all bands SSB only: Highpwr, low pwr, QRP Single op Single Band Single op VHF-UHF FM QRP Multi-operator Mobile (may be more than one operator) SWL	31 May Box 161 Stn A Willowddale ON M2N 5S8 or e-mail to ve3sre@compuserve.com
Florida QSO Party (USA)	1800z 29 Apr 2400z 30 Apr 0400-1400 off time for all entrants	80-10M CW and SSB	1pt/SSB QSO 2pt/CW QSO	For Florida stations: US States, Canadian RAC Sections, DXCC on each mode For others: Florida counties (67) on each mode Multiply your score by 1 of you ran over 150w, by 2 if you ran under 150w, by 5 if you ran under 5w.	RST QTH	Single Op Multi-op Singletx Multi-op multi-tx Mobile (may be more than one operator) Novice/Technician class licensees each of thse categories are further divided into high power, low power and QRP categories.	30 days K4OJ or e-mail to FLQSOParty@aol.com
Massachusetts QSO Party (USA)	1800z 6 May 2100z 7 May 0400-1100z off time for all entrants	All bands	1pt/Phone QSO 2pt/CW, digital,sstv QSO Stns outside MA Work MA stns only; MA stns work everyone.	Stns outside MA: MA counties (14) on each band MA stns: MA counties, US States, Canadian Provinces and territories, DXCC on each band.	RST QTH	- Outside MA - MA Single op - MA Multi-op - MA Portable - MA team (5 MA singleops)	6 Jun FARA P.O. Box 3005, Framingham MA 01701 USA or e-mail to n1tyh@aol.com
ARI DX (Italy)	2000z 6 May 2000z 7 May	160-10M CW, SSB and RTTY	0pt/VE 1pt/NA 3pt/DX 10pt/Italy	Italian Provinces (103) + DXCC on each band Is will send a 2-letter province abbreviation.	RST Ser#	Single op: All modes, single mode Multi-op, singletx SWL	1mo. Box 14 27043 Brioni (PV) Italy
Connecticut QSO Party	2000z 6 May 2000z 7 May (0400-1200 off time for all)	160-2M Phone CW RTTY	1pt/Phone, RTTY QSO 2pt/CW QSO 5pt/QSO with W1QI or W1AW	Connecticut counties CT stations count CT counties, US States, Canadian Provinces and Territories, DXCC countries.	RST QTH	Single op: fixed, mobile,Novicce, QRP Multi-op: Singletx, multi-tx	5 June CARA, PO Box 3441, Danbury CT 06813-3441 USA
Nevada QSO Party	0000z 6 May 0600z 7 May	160-6M CW SSB RTTY Packet	1pt/Phone QSO 2pt/other modes	Nevada counties Nevada stations count Nevada counties, US States, Canadian Provinces and Territories, DXCC countries	RST QTH	unknown	NW7O
Oregon QSO Party	0000z 6 May 2359z 7 May	All Amateur bands (exc 10, 18, 24MHz) All modes	1pt/Phone QSO 2pt/CW QSO	Oregon counties (36) Oregon stations count Oregon counties, US States, Canadian Provinces and Territories, DXCC countries	RST QTH	Single Op Multi-op Mobile Novice/Technician	30 June K9QAM
A. Volta RTTY (Italy)	1200z 6 May 1200z 7 May	80-10M RTTY		DXCC + Call areas in Canada, Australia and USA	RST Ser# CQ Zone	Single Op: All bands, single band Multi-op singletx SWL	31 Jul Box 55 22063 Cantu
Indiana QSO Party	1800z 6 May 2300z 7 May	160M-70cm CW and Phone	2pt/Phone QSO 3pt/CW QSO	Indiana counties Indiana stations also count US States, Canadian Provinces and territories and DXCC countries	RST QTH	Single Operator Multi-operator VHF/UHF	11 June Sharon Brown, 905 W Parkway Dr, Pleasant Lk, IN 46779 USA
CQ-M Int'l DX Contest (Russia)	2100z 6 May 2100z 7 May	160-10M +satellites CW, SSB and SSTV	1pt/own country 2pt/other NA 3pt/DX	DXCC countries + Russianautomous oblasts, Arctic islands, Crimea (UU), 4U1VIC (see full rules)	RST Ser#	Single Op Single band: Mixed mode, CW only, SSB only, Satellites Single Op All Bands: Mixed mode, CW only, SSB only, QRP Multi-op singletx SWL World War II veterans SSTV only	1 July CQ-M Ctte Box 88 Moscow Russia or e-mail to: cqm98@mai.ru
European Spring Sprint SSB	1500z 13 May 1859z 13 May	80-20M SSB	1pt/QSO	None	your call, other stn's call, Ser#, name	Single operator only	15 days DL6RAI

Addresses: CQ - 25 Newbridge Rd., Hicksville NY, 11801 USA. ARRL - 225 Main St, Newington CT, 06111 USA.Callsign - Callbook Address
Bands: The 30, 17 and 12m bands are never used in any contestPlease confirm the dates of these events on theintrenet at http://home.sol.no/~janalme/hammain.html or http://www.sk3bg.se/contest/

Hamfests — April

ALABAMA

Bankhead ARC's Best Little Hamfest in Alabama 29 April, 9 a.m. - 4 p.m. at Moulton, AL. Adm: $4. Table: $6. VE exams, Door prizes. TI: 146.96 & 442.425. For reservations: Mike Slayton 256/341-0073. General Info: Lee Creuzer, 256/351-7916. E-mail: N8MHC1@CS.COM. Web: www.n4idx.org.

ARKANSAS

Little Rock Hamfest 21 - 22 April at Little Rock Expo Center. Open 1600 21 April and 0800 22 April. Adm $7, tables $30, flea market tables $20, tail gate spaces $15, power $5. Forums, demonstrations, CW contest, QLF contest, QSL card checking, youth activities and lots more. For info and reservations: Jim Blackmon, K5VZ, 1008 Pine St. Arkadelphia, AR 71923-4919, Phone 870/246-6734, 870/246-7833, web: www.aristotle.net/~ares/lrh99.html

CALIFORNIA

Valley of the Moon ARC Hamfest 29 April 8 a.m. to noon at Sonoma Valley Veteran's Memorial Building, 126 First Street West, Sonoma, (one blk north of central Sonoma Plaza). Free adm., vendor spaces $10. VE test at 10 a.m. Full breakfast $5, pancake breakfast $3.50. Beginners' Foxhunt, forums, club station operation and QRP contest. TI: 145.35(- PL 88.5). For info: Darrel, WB6BOR, 707/996-4494.

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The **Fresno ARC** Hamfest 29 April, at Coombs Ranch. FREE to Buyers and Sellers. For info: Jim Haynes, 1781 Holland Ave, Clovis, CA 93611. 559-294-8390. Email: w6pxm@arrl.net.

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Kings ARC's Hams and Hackers Swap Meet 1 April, 8 a.m. at Hanford Fraternal Hall. FREE adm. Seller's Fee: $5. Door prizes, food. TI: 145.11, 147.33, 224.44, 441.90, PL100. For info: Doug, KC6BGQ, 9251 12th Ave., Hanford, CA 93230. Phone: 559/582-0949.

COLORADO

LARC Fest 2000 01 Apr. 8 a.m. at Boulder County Fairgrounds at Nelson and Hover Rds. Adm. $4, tables $15. VE exams, camp sites adjacent to fairgrounds. TI 147.27(+) or 146.52. For info: Fred, 303/678-5830, e-mail larc@qsl.net or web site: www.qsl.net/larc/.

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Pikes Peak Giant Hamfest 6 May, at Lewis-Palmer High School (Monument, CO). Adm: $4. Tables: $12/$10 addl. VE exams, Forums, Door prizes. TI: 146.97 and 146.52. Info: Bob Ryals, KIØGF, 3390 Blodgett Dr., Colorado Springs, CO 80919. 719/265-9950. Email: rryals@pcisys.net. Web: www.qsl.net/ppraa/swapfest.html.

CONNECTICUT

Radio Amateur Society of Norwich's Ham Radio Auction 1 April, at Waterford Senior Center(on Rt 85). FREE adm & parking. Bring your gear to sell(10% commission to RASON) Set-up: 9 a.m. Starts 10 a.m. TI: 146.730(-) For info: Tony, AA1JN 860/859-0162. Website: www.rason.org.

DELAWARE

Penn-Del ARC Hamfest and 2000 ARRL Delaware State Convention 30 April, 8 a.m. - 1 p.m. at Nur Temple. Adm: $5(11 and under FREE). Tables: $15 w/electricity or $12 w/out. Set-up: 6 a.m. Tailgating: $10. VE exams, forums, and much more. Fore more info: Hal Frantz, KA3TWG 302/793-1080. E-mail: hfrantz@snip.net. Web: www.magpage.com/penndel.

FLORIDA

The **Flamingo Net** & **University of Miami ARC**'s Amateur Radio/Computer/Electronic Tailgate Ham Swapfest, 15 April, at Physics Parking Lot(NW corner of the University of Miami Coral Gables campus) FREE to buyers and sellers. TI: 146.865 (-6). For info: Walt, W4DWN 305/895-0398.

GEORGIA

Cherokee Capital ARS's Calhoun Hamfest 22 April, at Suger Valley Community Center. Adm: $5. Table: $5. Food available, door prizes, VE exams, tailgating, and more. TI: 145.230(-) For info: Felton Floyd, AF4DN, 1054 Mountain Loop RD NW. Sugar Valley, GA 30746. Phone 706/629-0369. E-mail: af4dn@arrl.net.

ILLINOIS

DuPage ARC Hamfest & Computer Show 29 April, 8 a.m. - 2 p.m. at Hawthorne Race Course(Stickney, IL). Adm: $5 adv, $6 at door. VE exams, door prizes, and much more. For table call 630/985-9256. For info: Ed Weinstein, 7511 Walnut Ave., Woodrodge, IL 60517-2818. E-mail: darahamfest@aol.com.

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Moultrie ARK Hamfest 30 April, from 8 a.m. - 1 p.m. at Moultrie/Douglas County Fair Grounds. Admission: $5(14 and up). Tables: $10 adv. TI: 146.055/146.655 and 449.275/444.275. For info: 217/543-2178 days, 217/873-5287 eve.

MINNESOTA

Smartsfest 2000 16 April, 12 - 5 p.m. at Canterbury Park(Shakopee, MN) Adm: $5. Table: $10. Set-up: 8 a.m. TI: 147.165(+). For info: SMARTS, P.O. Box 144, Chaska, MN 55318.

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Midwinter Madness Hobby Electronics Show, 15 April, 7:30 a.m. - 2:30 p.m. at the National Sports Center(Blaine, MN) Adm: $7. Table(flea market): $20, $45(w/ electricity) Vendors: $95, $155(w/ electricity) Door prizes, VE exams(14 April). For info: RARC, 4737 S. HWY 101, PMB#276, Minnetonka, MN 55345. Phone: 612/537-1722. Web: www.visi.com/~k0ltc, e-mail: k0ltc@visi.com.

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Rochester ARC Hamfest on 8 April, at Graham Arena(Rochester, MN). Adm: $7. Table: $25 - $15. There will be Vendors and a Flea Market. For more info: John Scott, N0HZN, 4552 5th St. NW, Rochester, MN 55901. Email: n0hzn@aol.com. Website: http://members.aol.com/rarchams.

MISSOURI

Lebanon ARC April Fool Fest 2000 01 April 8 a.m. - noon at National Guard Armory, 301 W. Fremont Rd. Set-up 6:30

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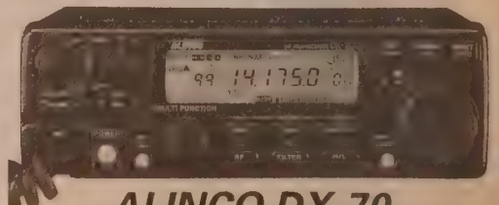
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a.m. Adm. $3, tables $8 adv., $10 at door. VE testing 9:30 a.m. No tailgating. For testing info: Bud Loar, KØMLH, HCR 16, Box 769, Lebanon, MO 65536, phone 417/588-5856. All other info contact; Micki Jensen, KCØEEX, 14225 Highway 64, Lebanon, MO 65536, e-mail: mjensen@llion.org, phone 417/588-2335.

NORTH CAROLINA

The 3rd Annual Morganton Hamfest 15, April at Burke Co. Fair Grounds (Morganton, NC) Door prizes, VE exams, plenty of tailgating and indoor table space. For info: Nathan Jaynes, KE4RCF, 125 Stephen RD., Morganton, NC 28655. ke4rcf@arrl.net. Sponsoring clubs are **Western Piedmont ARC** and **Lenoir ARC**.

OKLAHOMA

Lawton/Fort Sill ARC Hamfest & Computer Fair 8 April, 8 a.m., at Comanche County Fairgrounds(Lawton, OK). Adm: $5 adv, $7 at door. Tables: $10/$8 addl ($15 at door). For info: Bob Morford, KA5YED, 1415 NW 33rd St., Lawton, OK 73505. 580/355-6120

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Tri-State Amateur Radio Group Hamfest 2000 & Eyeball QSO 1 April, at Moorekand Fairbarns(Mooreland, OK) Adm: $4. Swap Tables: FREE. Tailgating & Vendors, Door prizes, forums, VE exams. For info: www.digitalcupboard.com/w5okt/.

PENNSYLVANIA

WACOM Hamfest/Flea Market 30 April, at Washington County Fair Grounds. Adm: $3. Tables: $8. VE testing. Talk-in: 146.79. For info: Dave DeMotte, N3IDH, 1768 East Maiden St., Washington, PA 15301. 724/228-8178.

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Penn-Del ARC Hamfest 8 a.m. - 1 p.m. 30 April at Nur Temple (1/r mi. north of intersection Rte 13 & 40, in New Castle, DE). Adm $5 (under 12 free). Tables $15 w/power, $12 w/o. $10 per space, VE exams, forums, Skywarn training, catered breakfast and lunch. TI: 146.955(-) or 224.220. For info: Hal Frantz, KA3TWG, 302/793-1080, e-mail; hfrantz@snip.net, or web: www.magpage.com/penndel.

SOUTH CAROLINA

Blue Ridge ARS Hamfest 29 April, at Spartanburg County Fairgrounds (Spartanburg, SC) Adm: $5. VE exams, Tailgating, Indoor area for exhibitors. Talk-in: 146.61 or 146.82. For info: Robert G. Watson, W4RGW, 510 E. Ferguson St., Clinton, SC 29325-2419. Phone: 864/833-2204. Email: w4rgw@arrl.net. Web: www.brars.org.

TEXAS

Key City ARC Hamfest 6/7 May. 8 a.m. - 5 p.m. Sat., 9 a.m. - 2 p.m. Sun. at Abilene Civic Center. Adm. $7 adv., $8/door. Free parking (limited RV parking for a nominal fee), VE exams. Tables $6. TI: 146.160(+). Info: Peg Richard, KA4UPA, 1442 Lakeside Dr., Abilene, TX 79602, telephone: 915/672-8889, e-mail; ka4upa@arrl.net.

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Ham Swap Meet 1 April, 7:30 a.m. at Washington County Fairgounds. FREE admission: Tables: $5. Tailgating available. TI: 147.260 (+.600). For info: Dan, N5UNU, 10312 HWY 36 N, Brenham, TX 77833. Phone: 409/836-8739.

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New Products

Information in "New Products" is supplied by the manufacturers to acquaint ***Worldradio*** *readers with new products on the market.*

ProLog2K for Windows logging program

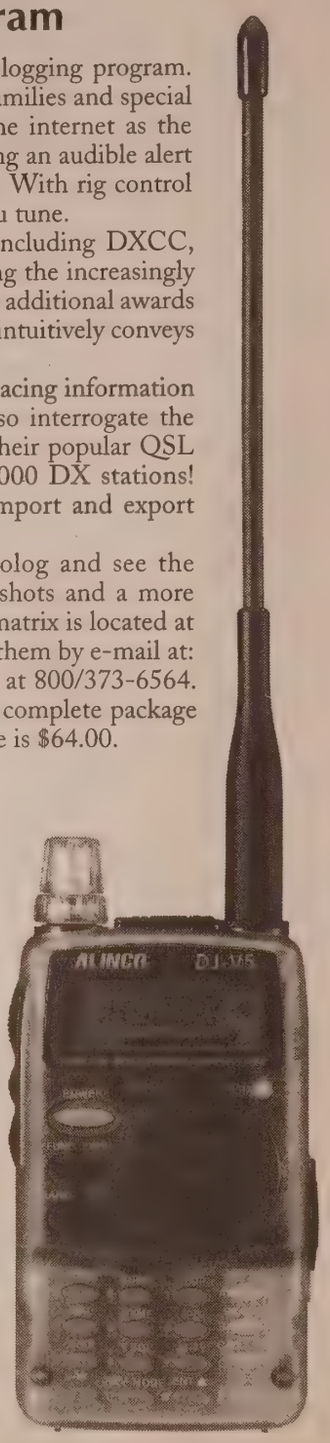
Datamatrix has released their new ProLog2K for Windows logging program. Thirty-six logbooks provide plenty of room for multi-operator families and special event logs. Packetcluster is fully supported using a TNC or the internet as the data source. ProLog2K makes working DX effortless by providing an audible alert whenever a DX spot arrives for a new prefix, zone or continent. With rig control enabled, ProLog2K automatically logs the band and mode as you tune.

ProLog2K will monitor and track all of the major awards including DXCC, WAC, WAS, CQZ, ITUZ and IOTA using all modes including the increasingly popular PSK31 mode. In addition, the user can customize sixteen additional awards of their choice. ProLog2K's "Traffic Signal" alerting rapidly and intuitively conveys the QSL status for each award, band and mode.

ProLog2K supports all of the Callbook CD-rom databases, placing information from those sources directly into the logging form. You can also interrogate the CD-rom directly if you wish. ProLog2K provides support for their popular QSL Route Database which currently lists the routes for over 71,000 DX stations! For continuity between platforms, ProLog2K supports the import and export of ADIF formatted files.

Visit the Datamatrix web site at: http://www.qth.com/prolog and see the ProLog2K system for yourself. They have a number of screenshots and a more intensive description of this feature-rich logging program. Datamatrix is located at 5560 Jackson Loop NE, Rio Ranch, NM 87124. You can reach them by e-mail at: prolog@rt66.com or by phone at 505/892-5669. Order toll-free at 800/373-6564. Suggest retail price is $49.95 for ProLog2K for Windows. The complete package including ProLog2K for Windows and the QSL Route Database is $64.00.

See-through HT



Alinco, USA has released new "clear" or "see-through" versions of its popular DJ-V5 VHF/UHF hand-held transceiver. The new models are the DJ-V5TDC, powered by a transparent dry-cell battery pack and the DJ-V5TDCH that comes with a black NiCd battery pack. The new models are targeted to younger users who may want a bit more "style" and to "tekkies" who enjoy seeing some of the internal components in the new HT.

Alinco's DJ-V5T models are compact transceivers designed to operqate on the 2-meter and 70 cm bands. The HT features alphanumeric display, up to 5 watts power output, 200 memories, and expanded receive capability offering coverage from 76 - 999.995 MHz (cellular blocked), narrow and wide FM receive modes along with CTCSS encode and decode.

Some additional features include four scan modes, five programmable scan banks, automatic internal temperature protection, cable cloning, SMA antenna connector, 13.8 VDC direct input, four different European tone bursts, autodial memories, input voltage display with over voltage warning, MARS/CAP capability, adjustable AF audio tone and more. Alinco will continue to offer the black version of the radio in combination with the new transparent models. Suggested price of the Alinco DJ-V5TDC is $355.95. The DJ-V5TDCH (with the 5 watt battery pack) is $387.95. Both models are available at Amateur Radio dealers worldwide that carry Alinco products.

Automakers helping Hams

With the recent restructuring of Amateur Radio licensing by the FCC, interest in the hobby is expected to rise dramatically. As a result, the "Big 6 3/4" automakers have recognized a problem that has bothered Hams for years.

In the last 15 years, more and more plastic parts have been designed as part of the construction of modern cars and trucks. Some of these non-metallic parts are being used on exterior body panels, including trunks and roofs. In an effort to aid amateurs who want to install an antenna on one of these surfaces, the automakers now offer special panels designed for radio installations. These panels are thicker than normal due to the sandwich construction utilizing a layer of lead and chicken wire between two outer layers of fiberglass or plastic. The layer of lead actually aids the antenna radiation pattern and preliminary estimates show an 18 dB gain over a standard roof or trunk surface. The weight of the vehicle will only increase by an estimated 1,482 lbs. A 25-33% drop in gas mileage would be normal.

Another problem amateurs are getting help with is the lack of enough electrical capacity to run high power radios and amplifiers. As part of the "Ham Accessory Package" the automakers are offering a 785 amp alternator as part of the special radio package. In addition to the huge alternator, #2 gauge wire replaces the usual 14 to 18 gauge wire throughout the vehicle. The alternator is capable of running a 1 KW amplifier and can charge a 12 volt battery in just over eight seconds. A special cord is also offered to charge handheld batteries in just under two seconds and a built-in limiter circuit should shut down the charging circuit before the battery explodes.

This special "Ham Accessory Package" will be available 01 April at dealers nationwide. The manufacturers suggested retail price for the package is $4,739.26. For more information, visit the web site: http://www.imafool.com and click on the "Ham Accessory Package" link.

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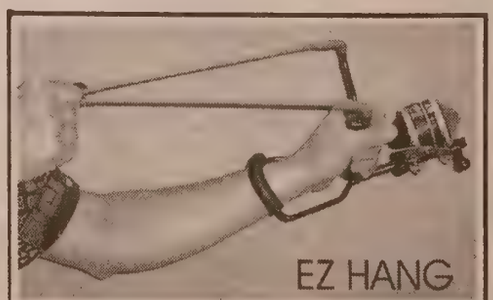

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VE Exams

As a service to our readers, ***Worldradio*** presents a feature listing of those VE exams, times and locations which are sent to us. Please remember that our deadline for publication is three months in advance. For example, if your VE group is scheduling an exam for December, please have the information to us by mid-September. ***Worldradio***, 2120 28th St., Sacramento, CA 95818. Please mark the envelope "VE Exams." List the location (City), any information examinees should have (advance registration, etc.) and the name and telephone number of a person to contact for further information. Examinees should bring their original license (along with a photo copy), two forms of identification (at least one should be a photo), and required fee.

p/r pref=pre-register preferred but w/i OK
p/r=pre-register only—no w/i
w/i=walk-in only
w/i pref.=w/i preferred to p/r

State	City	Contact	Notes
Alabama			
4/04/00	Mobile	David, WA4AVC 334/649-5229	p/r pref
4/10,15/00	Montgomery	Steve, K4NM 334/271-9603	w/i
Arizona			
4/08/00	Tucson	Joe, K7OPX 520/886-7217	w/i only
Arkansas			
4/22/00	Gassville	Phil, AB5ZU 870/425-7406	p/r pref.
California			
Hotline	Carmichael	Info Hotline: 916/492-6115	w/i
4/27/00	Colton	Harold, AB6RN 909/825-7136 days or 909/685-6073 eves	p/r pref.
4/29/00	Culver City	Scott, K6PYP 310/459-0337	w/i
4/01/00	Culver City	Clive, AA6TZ 310/827-2538	w/i pref.
4/29/00	Escondido	Harry, WA6YOO 760/743-4212	p/r only
4/10/00	Fremont	Dennis, K6DF 510/791-0914	w/i only
4/29/00	Glenn Ellen	Collen, 707/996-9252	w/i ok
4/08/00	Jackson	Ray, ND6S 209/296-3412	p/r pref.
4/09/00	Sacramento	Dick, N6DK 916/383-2113	p/r only.
4/08/00	San Pedro	Elvin, N6DYZ 310/325-2965	p/r pref.
4/15/00	Santa Rosa	Hotline - Recording, 707/579-9608	w/i ok
Hotline	Sebastopol	Recording, 707/579-9608	
4/15/00	Stockton	Mark, W6DKI 209/465-7496	w/i
4/08/00	Sunnyvale	John, KG6XF or Gordon, W6NW 408/255-9000	w/i only
4/08/00	Ventura	George, KN6LA 805/388-2488	p/r
Connecticut			
4/08/00	Newington	Dan, K3UFG 860/206-3379	p/r pref.
Florida			
4/13/00	Ft. Myers	Leonard, KC4GOA 941/694-2505	w/i
call	St. Pete	Mark, NP3R 727/528-0071	w/i pref.
Idaho			
4/08/00	Boise	Lem, W7JMH 208/343-9153	w/i pref.
4/26/00	Grangeville	Larry, AB7GY 208/983-2163	w/i pref.
Illinois			
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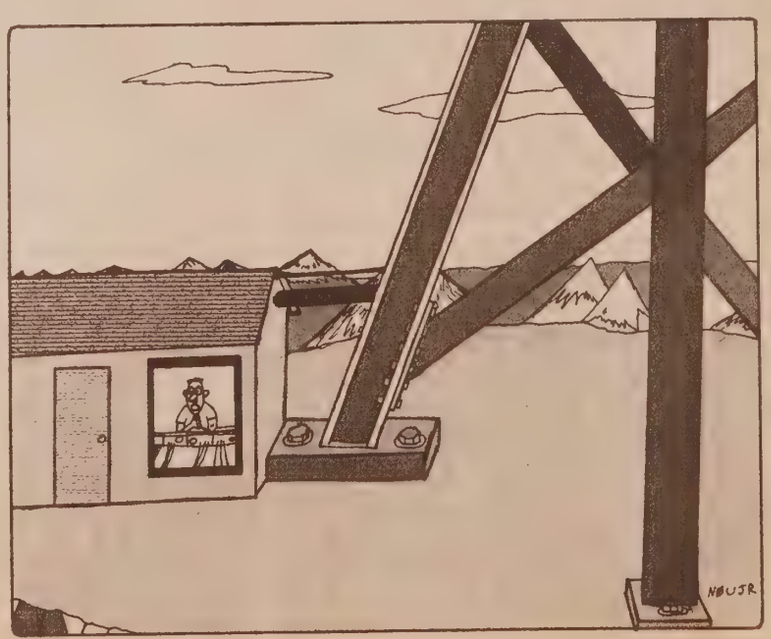

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Restructuring...

(Continued from page 27.)

Restructuring and providing one element of Morse was inevitable in order to provide reciprocal licensing to those countries with which we have an agreement. Many countries have only had one CW requirement of 5-7 wpm for years. CW is great for a casual rag chew or rapid fire contest contacts, but as a public service mode of communication, it has served its usefulness. The U.S. military, the Coast Guard and the maritime services have all retired CW to make way for more efficient means of communication. The same goes for the amateur service. Before you jump and say "...CW will alway get through when voice can't...," I suggest you study up on some of the new digital modes such as PSK31. I have had 100% copy on a signal from a VK station that was running less than 3 watts and I could not hear with my own ears. Try that with CW.

For those of you who have had their Extra Class licenses for more than 20 years (the Native Extra), pick up a copy of the license manual for the current Advanced and Extra, element 4A and 4B and try your hand at one of the practice exams. I would bet 50% could not pass one of those practice exams.

When you hear someone who is obviously inexperienced, provide them with guidance. If you are the 'old grouch' who gets on the local repeater and publicly chastises someone because they happened to give their call sign first when calling another station or rudely inform another station the word 'good-buddy' is not allowed, then turn in your Ham license, sell your equipment and take up another hobby because you are what's wrong with Ham radio today.

I have been licensed almost 20 years and sat at the FCC in Dallas in 1982 for my current Advanced class license when there was no such thing as a multiple choice CW exam.

Jeff K. Steinkamp, KD5YG
Tucson, AZ

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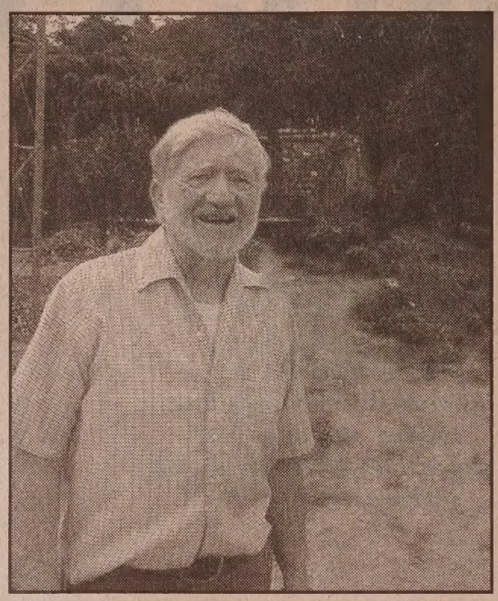

Walt Gordon, W6NHY, now past the eighty year mark, can no longer be called a youngster. But he is still very active on the amateur bands. He started his amateur hobby in the year 1931 when he wanted the Boy Scout radio merit badge. To practice the code a friend and Walt set up two of the old model T spark coils to talk a couple of blocks away. That operation came to a very rapid halt when it seemed to tear up all the radios in the small town of Madera, California. He said they should have known this as they where using a broadcast receiver to pick up each others signal. They then used two buzzers of which they hooked the keys to and ran wire between each house so they could work on their CW.

When he was sixteen years old Walt moved to Fresno, and received his first Amateur Radio license while attending Fresno Technical High School. He also became the president of the high school radio club, a real big deal in those days. Walt went into the C.C.C. camps and was a radio operator for the camp.

All the C.C.C. camps in those days were run by the U.S. Army personnel at that time, long before the MARS system was even thought of. In 1938 he was stationed at an Army Amateur Radio station, which was connected with the U.S. Army Signal Corps. He then became a radio instructor for the C.C.C. camps turning out a few licensed Hams.

Walt at one time used the call of N6NHY in the days of the naval reserve drills. He spent some active duty time as a radio operator on broad U.S. Naval ships.

Now too old to put up big antennas, he had some good young friends do it. I guess when you're 80 anyone seems younger. The big six element 60-foot boom quad that just went up is so his XYL, N6SFX can keep her sked with their daughter Marleen, N6PBD/MM on her sailboat. No matter where she might be in the world, they have been doing this for over ten years. He would have put up a much smaller antenna, but he wanted all the gain he could get so mother and daughter could have their QSOs each week.

Walt does miss the old days when you built your own transmitters and receivers, from the junk box or where ever you could find parts. That is one of the reasons he was on CW for many years. No money for speech amplifiers, microphones and other needed parts to make the change to phone type operation.

He still thinks he was a much happier Ham when he had to find parts and build his own gear. Now he looks at all that expensive radio gear on his bench and still has to say "something is missing" it just isn't like it used to be.

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